WESTERN
Edition

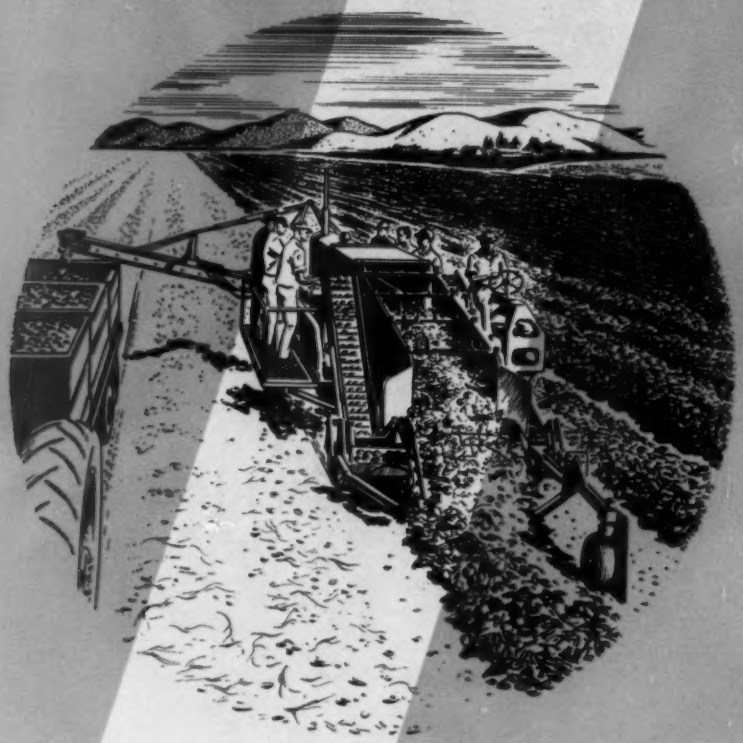
CANNER
PACKER

September 25, 1961

CANNED • DRY • FROZEN • GLASS

a consolidation of:

CANNER and FREEZER
FOOD PACKER
WESTERN CANNER and PACKER



YEARBOOK NUMBER

Are you giving your institutional customers the best packaging?

They can store food conveniently in Duraglas® institutional containers

Large-capacity Duraglas containers are designed for the institutional market. Food can be stored in the original container until it's all used. Glass is inert . . . won't affect taste or aroma. Caps, which are easy to remove, seal contents safely between servings.

Duraglas containers also provide a visual inventory of what's in the containers, and how much of it is left.

Offer your foods to the institutional trade in Duraglas packages. Let the package help you sell the product. Call your nearby O-I office today or write to Owens-Illinois, Toledo 1, Ohio.

DURAGLAS CONTAINERS
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO
PACIFIC COAST HEADQUARTERS · SAN FRANCISCO

NEW BULLETIN FOR 1961

From National Canners Association describes importance of . . . DROSOPHILA CONTROL

owing excerpts are taken from this bulletin.

NATIONAL CANNERS ASSOCIATION
1133 - 20TH STREET, NORTHWEST
WASHINGTON, D. C.

NOTICE

"The Food and Drug Administration has made extensive seizures of tomatoes and tomato products due to *Drosophila* egg and maggot contamination." ..."We strongly urge the cooperation of all canners of tomatoes and tomato products to initiate a complete program of *Drosophila* control."

Use of Pyrethrum Dust

"Extensive experiments and industry experience have revealed that pyrethrum dust containing 0.1% stabilized pyrethrins plus 1.0% piperonyl butoxide applied to tomato fruit will repel Drosophila flies and largely prevent egg deposition for 10 to 20 hours."

"Tomato canners are urged to discuss the above pyrethrum dust requirements with their supplier and obtain adequate certification that the dust purchased meets these requirements, namely:

(a) "That the dust contains a minimum of 0.1% stabilized pyrethrins plus 1.0% of piperonyl butoxide."

(c) "That the pyrethrum dust has been prepared in thoroughly clean equipment."

Copies of "Drosophila Control," from which these excerpts were taken, are available free from Fairfield Chemicals.

Pyrethrum dust bases, containing piperonyl butoxide and pyrethrins, are available to insecticide formulators and processors nationally through the nationwide field offices and sales representatives of Fairfield Chemicals, Food Machinery and Chemical Corporation.

*Reg. U. S. Pat. Off. F. M. C.

FOOD MACHINERY AND CHEMICAL CORPORATION ®

Putting Ideas to Work

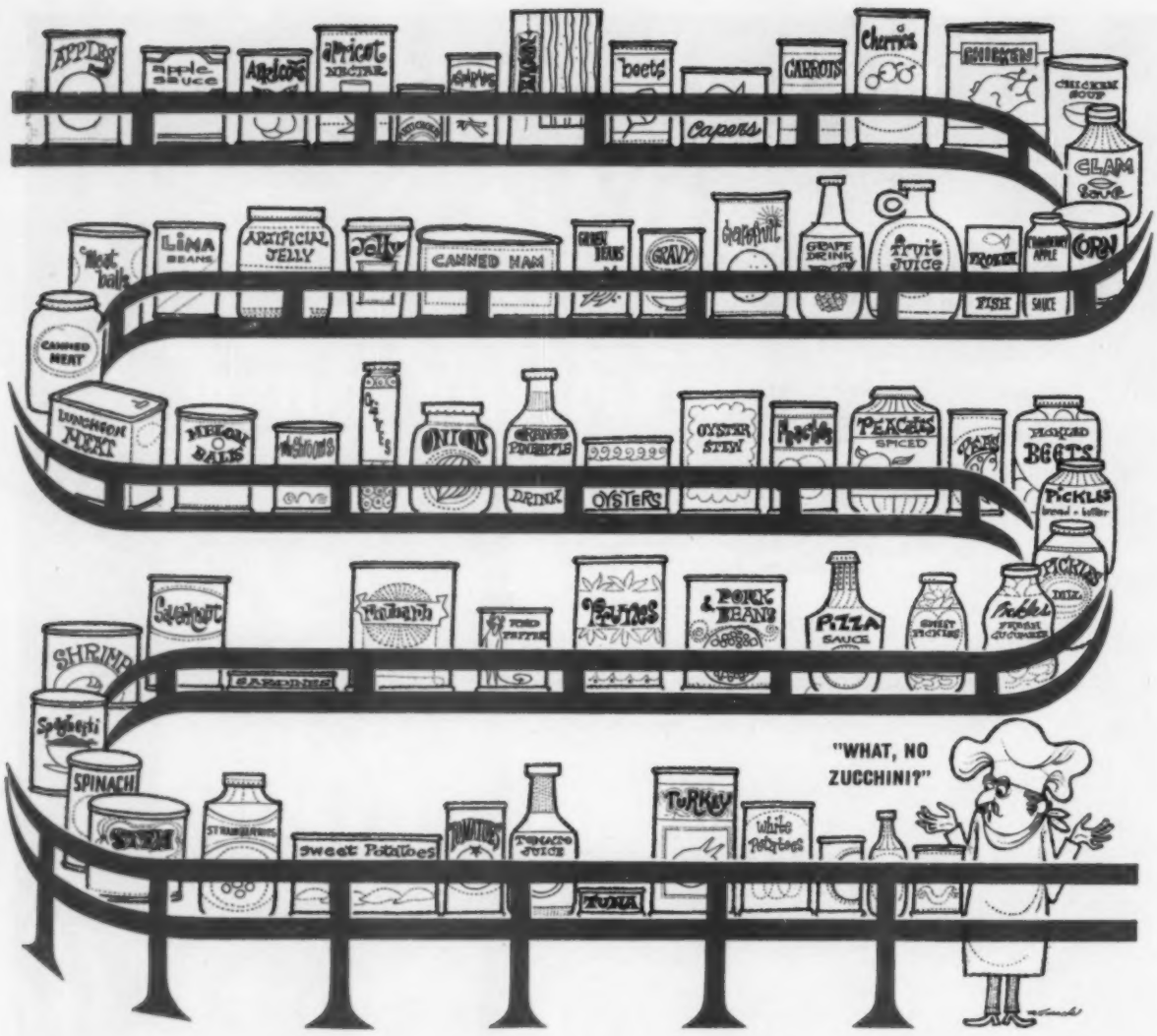
FOOD MACHINERY AND CHEMICAL CORPORATION

Fairfield Chemicals

Sales Headquarters

441 LEXINGTON AVENUE, NEW YORK 17, N. Y.

Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.



NEW MORTON FLOCRON DISPENSER CUTS CANNING COSTS FOR 63 PRODUCTS!

No splash . . . no spill . . . no overfill! Companies who use Morton's amazing Flocron liquid dispenser system to handle any of the 63 different food products listed above report that Flocron avoids the waste inherent in "overflow fill" systems, stops splash loss, and dispenses more than 40 different ingredients with money-saving speed and accuracy.

The versatile Flocron is actually a precise electronic system with photoelectric circuits in a sealed unit and a new lever-type photo switch to activate dispensing. It assures accuracy, even on lines handling up to 300 units per minute! Remote electronic controls permit you to "dial" the exact amount of liquid required for varying can sizes.

Designed for efficient, low cost operation. The Flocron is made of stainless steel and plastic and is constructed to avoid corrosion and lengthy breakdowns that result in costly downtime. There are no valves to stick or clog, and the Flocron is easily cleaned by circulating a detergent solution through the fluid system and following this with a sanitizer. No need to revise production lines. The Flocron can be operated with existing equipment. Scientific Dispensing Company technicians in all areas will assist with installation and servicing.

Some of the liquids you can dispense with the Flocron are: ascorbic acid, beef gravy, brine, concentrated syrup, hot butter, Monosodium Glutamate, spice oils, sugar and brine, tomato puree and vinegar.

MORTON ALSO OFFERS CORROSION-FREE BRINEMAKERS

In addition to the Flocron liquid dispenser, Morton also offers a complete range of Brinemakers, capable of producing up to 800 gals. of saturated pure brine per hour. With the Morton Brinemaker, salt is handled only once at the Brinemaker location from where it may flow or be pumped to the Flocron or other usage points. No space-wasting storage tank needed; no need for costly shut downs for cleaning out impurities.

SCIENTIFIC DISPENSING COMPANY / DIVISION OF

MORTON SALT COMPANY

110 N. Wacker Drive • Chicago, Illinois • FI 6-1300

Western Edition

CANNER PACKER

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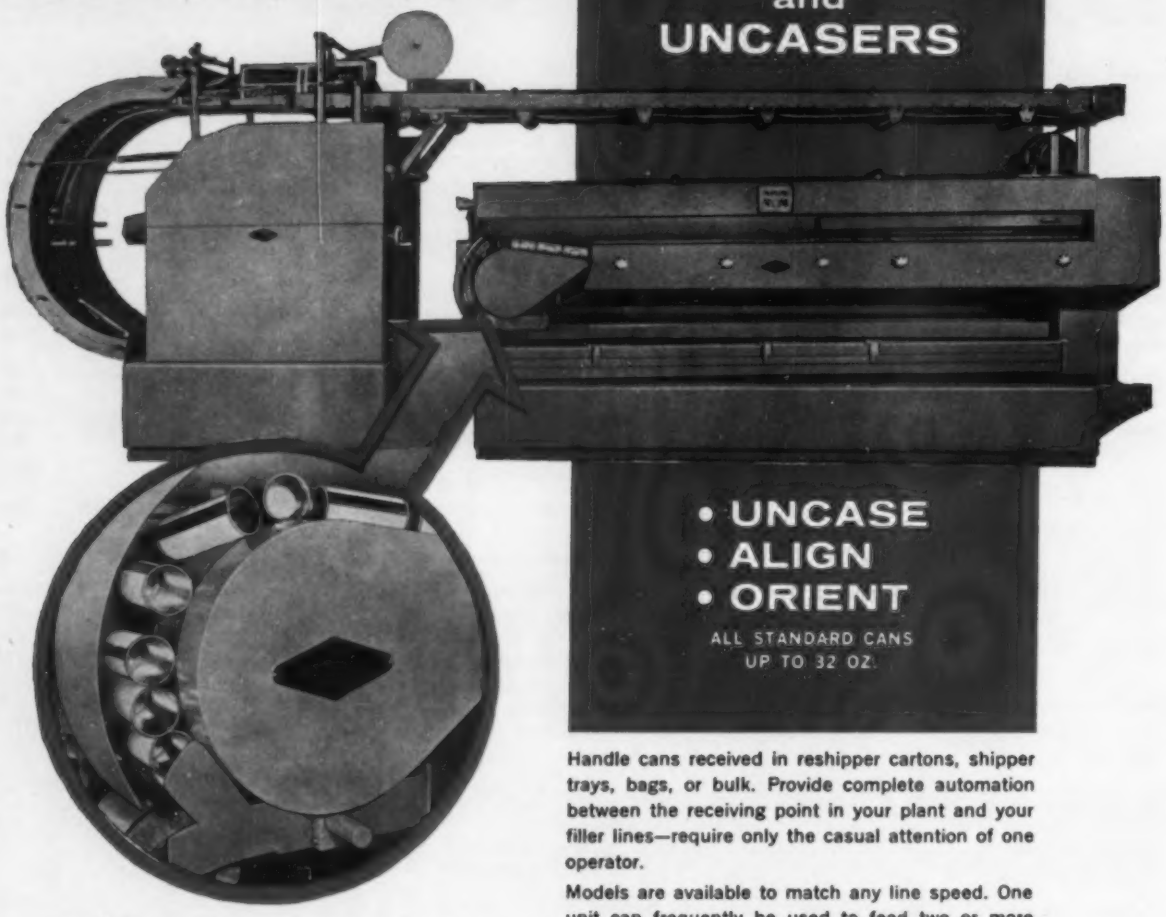
ATKRON DUMORE

CAN SORTERS and UNCASERS



- UNCASE
- ALIGN
- ORIENT

ALL STANDARD CANS UP TO 32 OZ.

FOOLPROOF MAGNETIC ORIENTATION

Whether the aligned cans arrive at the final sort with open or closed end forward, the unique magnetic pulley turns the open ends to face in the same direction and feeds the cans to the filler line properly oriented for filling.

Handle cans received in reshipper cartons, shipper trays, bags, or bulk. Provide complete automation between the receiving point in your plant and your filler lines—require only the casual attention of one operator.

Models are available to match any line speed. One unit can frequently be used to feed two or more filler feed lines for maximum efficiency in minimum space. For example, Model CUS-12 (illustrated above) will handle up to 1000 standard 211x413 beer cans or 1200 standard 203x314 juice cans per minute. Smaller models provide proportionately less capacity to meet any requirement at minimum cost.

CAN SORTERS ALSO AVAILABLE SEPARATELY

YOU CAN PURCHASE ATKRON DUMORE CAN SORTERS WITHOUT THE UNCASER FOR DIRECT FEEDING FROM OVERHEAD STORAGE HOPPERS OR WITH AUXILIARY EQUIPMENT FOR METERED FEEDING OF BAGGED OR BULK CANS.

For literature and more information, write, wire, or phone:

ATKRON DUMORE

MANUFACTURED BY ATKRON, INC., CUYAHOGA FALLS, OHIO

Distributed and Serviced exclusively by

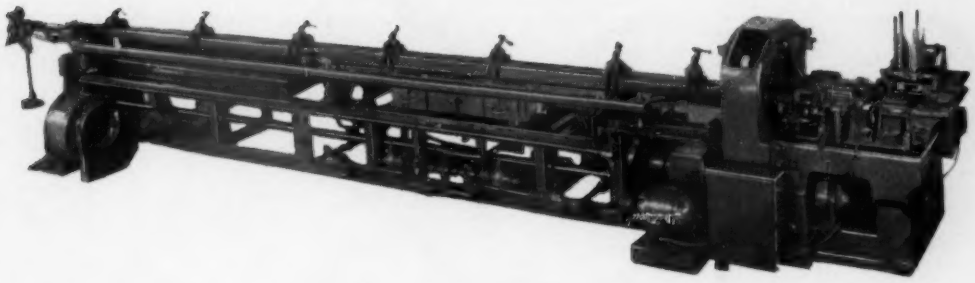
WORLD WIDE CANNERS — ECONOMIC MACHINERY CO. WORCESTER 3, MASS.
Division of Geo. J. Meyer Manufacturing Co.

and DUMORE — GEO. J. MEYER MANUFACTURING CO. MILWAUKEE, WIS.

AT-262-15

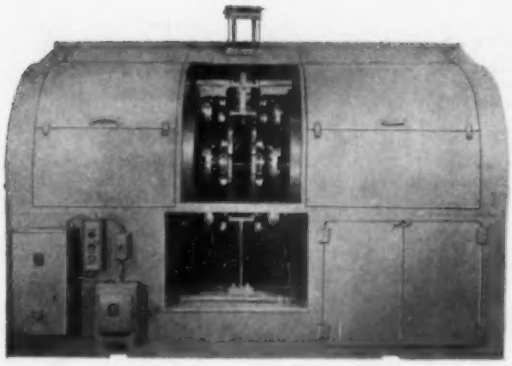
CAN MAKING MACHINERY

AUTOMATIC AND SEMI-AUTOMATIC



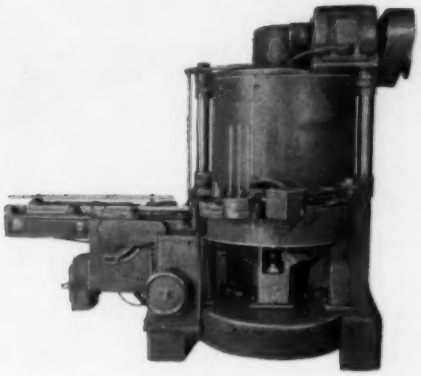
AMS #289

High speed Bodymaker for round and irregular cans. Inside and outside soldering, — Side Seam Cement. Speeds up to 450 per minute.



AMS #561

High Speed Irregular Flanger
Perfect Right Angle Flange
all around.
Speeds up to 250 per minute.



AMS #555

High Speed Irregular Seamer
Straight Line Body Feed.
Positive End Feed.
Speeds up to 250 per minute

The Max Ams Machine Co.

BRIDGEPORT 5, CONN. CABLE: SANCAN

LEADERS IN THE MANUFACTURE OF CAN MAKING MACHINERY FOR OVER 60 YEARS.

A symbol for a perfect pack...

DIAMOND CRYSTAL FLAKE-TYPE SALTS

- Uniformly 99.95% Pure
- Uniform in the size and grain you need—EVERY TIME

Diamond Crystal Flake-type Salts, made by the exclusive Alberger process, assures a flake-like crystal of extremely high purity. Precision screening provides a wide range of sizes to meet all requirements. This high purity and controlled size represents a MEASURABLE MARGIN OF SUPERIORITY over ordinary granular-type salts.

Diamond Crystal Flake-type Salts contain less than 20 parts per million insolubles. Filter pad tests consistently indicate that it has the lowest content of insoluble matter or foreign material of *any* canning salt. The low content of injurious compounds (calcium, magnesium) and trace metals provides the required purity that permits still further up-grading of your product. The unmatched cleanliness of this salt avoids reaction with oxalates and formation of white precipitate. Because of this, Diamond Crystal Flake-type Salts bring out the natural flavor of your product.

Learn exactly how these product features can benefit you. Call or write the nearest Diamond Crystal sales office.

Diamond Crystal Salt Company

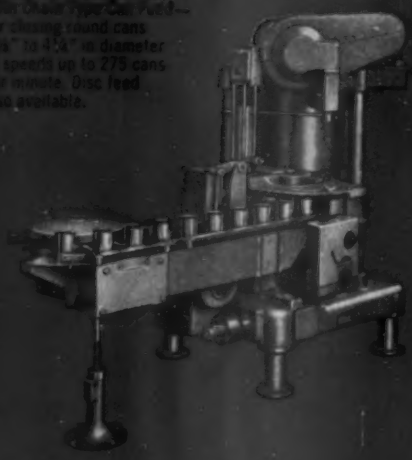
ST. CLAIR, MICHIGAN

PLANTS: AKRON, OHIO; JEFFERSON ISLAND, LA.; ST. CLAIR, MICH.
SALES OFFICES: AKRON • ATLANTA • BOSTON • CHARLOTTE • CHICAGO
DETROIT • LOUISVILLE • MINNEAPOLIS • NEW ORLEANS • NEW YORK

Which ANGELUS CAN CLOSER *for you?*

MODEL 40P-MSLF SEAMER

With Chain Type Can Feed—for closing round cans 2¾" to 4¾" in diameter at speeds up to 275 cans per minute. Disc feed also available.

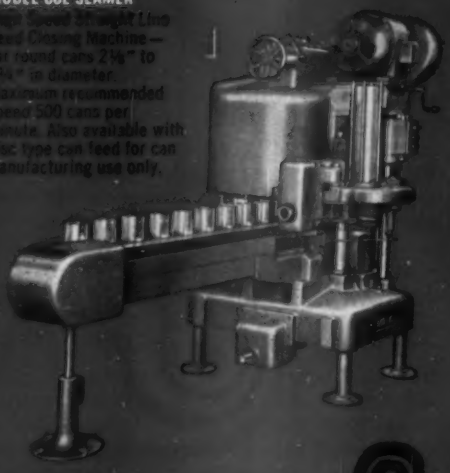


MODEL 50P SEAMER

With disc Type Can Feed—for making or closing round cans 5" to 6¾" in diameter at speeds up to 150 cans per minute.

MODEL 60L SEAMER

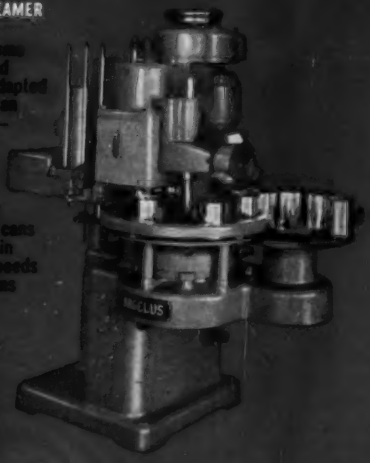
High Speed Straight Line Feed Closing Machine—for round cans 2⅛" to 4¾" in diameter. Maximum recommended speed 500 cans per minute. Also available with disc type can feed for can manufacturing use only.



MODEL 10P SEAMER

Designed for moderate volume production and particularly adapted for frequent can size changes—

adjustable for closing round cans 2⅛" to 4¾" in diameter at speeds of 30 to 85 cans per minute.



These are a few of the many Angelus Seamers designed to meet all round can closing requirements. Angelus, with over 45 years of specialized experience, is the nation's only manufacturer exclusively producing automatic round can closing machines.

WRITE TODAY for complete details. Specify products, can dimensions and your capacity requirements.

ANGELUS

Sanitary Can Machine Company

Cable Address "Angelmaco" Western Union Code
4900 Pacific Boulevard • Los Angeles 58, Calif.

In Canning...

THE RIGHT ADHESIVE IS LIKE THE RIGHT PRODUCTION MANAGER

Maybe you can't compare apples and oranges, and most likely no one wants to be compared with an adhesive. But the *right* production man and the *right* adhesive can have an important effect on profits.

The right production manager not only cracks the whip, he applies an intimate knowledge of his men and machines to a production process calculated to turn out a quality product . . . at maximum profit.

Similarly, to contribute to *profitable* production, the right adhesive must do more than just adhere.

Swift's line of resin adhesives for canning are specifically formulated to offer the user *selectivity* in speed and tack characteristics. Additionally, Swift's high speed resin Lap End Pastes with rust inhibitors added are made for optimum efficiency at production-peak levels.

Don't overlook the profit *opportunity* in properly specified, properly used canning adhesives. *Swift* is the informed source for prompt, courteous, and *authoritative* service. 24 strategically located Swift adhesives plants produce a complete line of canning adhesives for the most specific applications. Call your nearby Swift Adhesives Specialist, or write for further information. Swift & Company, Adhesive Products Department, Chicago 4, Illinois.

To Serve Your Industry Better

WITH THESE ADHESIVE PRODUCTS

RESINS AND RUBBERS IN EMULSION OR SOLVENT;
DRY, LIQUID AND FLEXIBLE ANIMAL GLUES
LIQUID DEXTRIN ADHESIVES

A-62

WISCONSIN FOOD PROCESSOR CUTS DOWN ON BROKEN BEET SLICES WITH 7 SIMPLICITY SCREENS

Broken beet slices, long a plague to food processors, have been largely overcome with Simplicity Food Screens. The gentle, shuffling action of this screen, as compared with the violent rotary action, insures that breakage will be kept to a minimum.

Pictured above are six Simplicity Model "C" 3' x 8' Single Deck Food Screens. These units are set up in tandem in batteries of three. A belt feeds the beet slices to the rear screen which has a stainless steel screen cloth section 6 feet long. The openings in this section are 1⅛" sq. The remaining two feet of deck is stainless steel perforated plate, with 1⅝" round, staggered openings. All slices larger than 1⅝" feed over to the second screen which has two four foot deck sections. These sections are stainless steel, perforated plates. The rear section has 1¾" round staggered openings—the front section has 2⅛" round staggered openings.

All slices over 2⅛" pass over, thus five distinct separations have been accomplished.

The seventh screen, also a Model "C" 3' x 8' single deck, is equipped with two four foot deck sections. The feed end is stainless steel screen cloth with ⅜" sq. openings. Here the undesirable end cuts are scalped off. The remaining four feet of deck is stainless steel perforated plate with staggered openings, 1⅜" round. Thus the unit has scalped off the broken slices and end cuts and separated two sizes.

These units will separate carrots in a like manner.

Simplicity
TRADE MARK REGISTERED

ENGINEERING COMPANY • DURAND 2, MICHIGAN

SALES REPRESENTATIVES IN ALL PARTS OF THE U.S.A.
FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario.
FOR EXPORT: Brown & Sites, 50 Church Street, New York 7, N. Y.

Dear Sir,

California Vegetable Concentrates' business is providing solutions to your most difficult problems, such as;

PROBLEM	SOLUTION
Uniformity of ingredient√	C.V.C.√
Ingredient cost control√	C.V.C.√
Exacting portion control√	C.V.C.√
Inventory control√	C.V.C.√
availability;√ transportation;√ space√	C.V.C.√

because C.V.C. means . . . Convenience, Versatility, Control, in addition to Economy

HERE ARE TYPICAL PRODUCTS THAT BENEFIT FROM C.V.C. INGREDIENTS:

BAKERY ITEMS
Specialty Breads
Cracker Specialties

DAIRY PRODUCTS
Cottage Cheese Variations
Cheese Dips

PASTA PRODUCTS
Baby Pastinas
Dry Soup Mixes
Noodle Specialties
Macaroni Specialties

PET FOOD
Canned or Dry

FROZEN FOODS
Prepared Dishes
Meat Pies

CANNED FOODS
Potato Salads
Seasoned Vegetables
Stewed Tomatoes
Juice Cocktails
Dietetic Tuna

PROCESSED MEAT
P & P Loafs
Vegetable Meat Loaf
Chicken a la King
Stews and Soups

SPECIALTIES
Aspics
Gelatin Salads
Relishes
Pickles
Chili Sauce
Meat Sauces
Vegetable Salads

HERE IS THE COMPLETE LIST OF C.V.C. DEHYDRATED VEGETABLES:

ASPARAGUS
BEET
CABBAGE
CARROT

CELERY
HORSERADISH
KALE
LEEK

LETTUCE
OKRA
ONION—WHITE - GREEN
PARSLEY

PARSNIP
PEPPERS, GREEN - RED
PIMIENTO

PUMPKIN
SPINACH
TOMATO
TURNIP — WATERCRESS

Look to C.V.C. for Customer Service

RESEARCH — assistance in problem areas, and product development
FORMULATION of special blends to fit your particular needs.

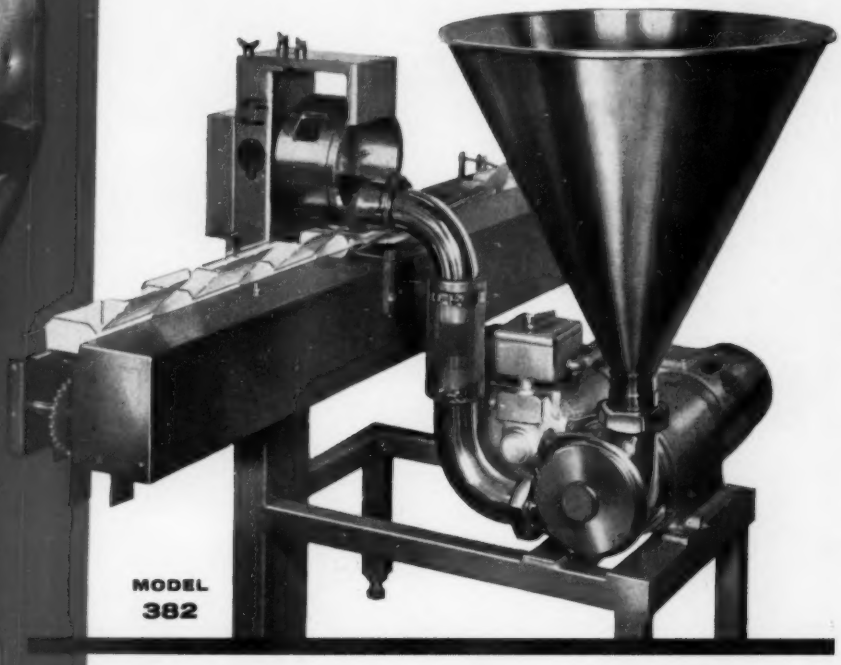
CALIFORNIA VEGETABLE CONCENTRATES, INC.

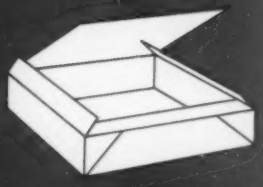
705 WHITMORE RD.
P.O. BOX 3210 MODESTO, CALIF

LEADING MANUFACTURER OF DEHYDRATED VEGETABLE PRODUCTS

"pace setter for quality standards in the markets of the world"

A HIGH SPEED FROZEN FOOD FILLER that jumps production



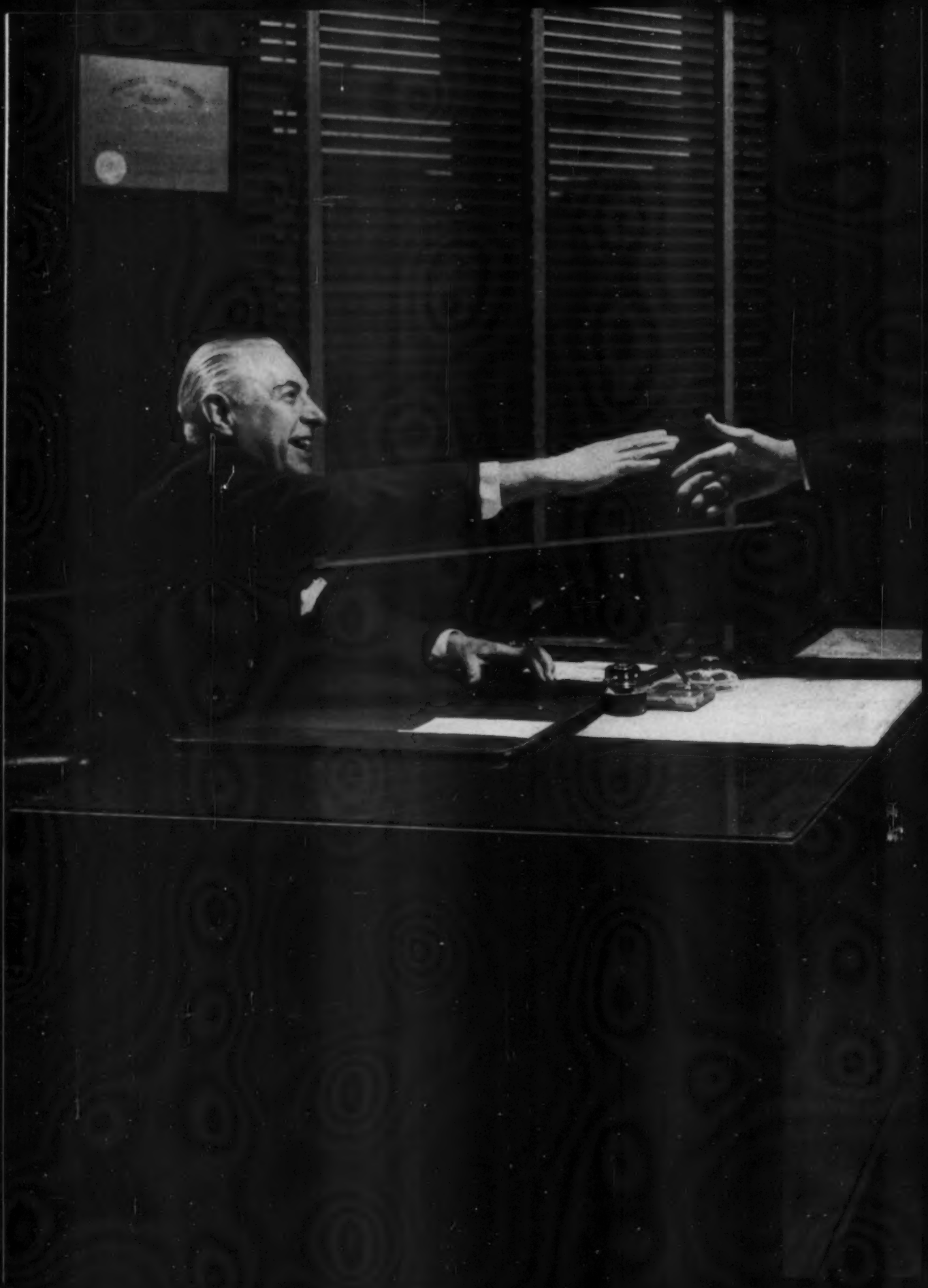


Fills from 100 to 200 packages a minute

Even at High Speeds your product is protected by the gentle action of the filling principle used on the completely *automatic* Anderson Model 382 Frozen Food Filler now being offered food packers. Packages move steadily through the filler with no stops, as the rotating turret of the filler head allows an accurately measured fill to drop instantly into the open box. The filler is timed with and from the box opener. Model 382 is exceedingly clean in operation and meets the strictest of sanitary requirements. Products such as spinach, squash, creamed corn, and many other frozen foods are being automatically boxed at high speeds by Anderson Model 382 Automatic Filler. Write today for full information. Please specify your type of product and other pertinent information.

Anderson

ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS



Your Anchor Man brings you SPECIALIZATION in glass packaging

Your Anchor Man knows glass packaging. He brings you all the benefits of Anchor Hocking's half-century of specialization in glass packaging. And he is supported in depth by experienced research, engineering, quality control and service technicians.

To most completely meet your diverse needs, your Anchor Man offers you an extensive line of Anchorglass containers—in crystal, amber, emerald green, georgia green—in all standard styles, sizes and finishes. He also supplies an equally complete line of Anchor twist, lug, screw or friction-applied metal caps and machines to apply them at speeds ranging from 30 to 1,000 per minute. In addition, he offers you molded closures in a variety of attractive designs and colors. And, to keep your production lines running smoothly and efficiently, you can always count on prompt, personalized service. Anchor Hocking Glass Corporation, Lancaster, Ohio.

ANCHOR HOCKING

Specialists In Glass Sales-packages

FROM Planning... TO Canning!

THE FINEST CONTAINERS AND SERVICE COME FROM CANCO!

Canco service starts long before production. Canco operates the world's largest food research laboratory and has unmatched experience in canned food product formulation. Technical Service people are ready to act as your consultants on the proper use and formulation of raw materials, canning methods and equipment, quality control, or any problem relating to the canning procedure.

Canco's can-handling and plant layout engineers are available for assistance. They are experts in increasing speed and efficiency within your plants.

A staff of professional home economists is available to help you develop new products, evaluate proposed or existing products and to develop recipes.

The aim of Canco service is to produce containers that promise you better packaging, fewer production stoppages, lower packing costs. That means a better product *. . . more profits for you!*

CANCO Division AMERICAN CAN COMPANY

New York • Chicago
New Orleans • San Francisco

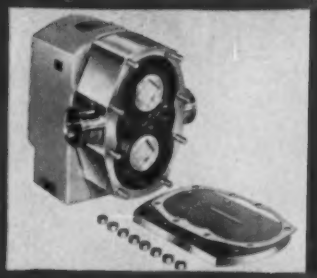
if you PUMP IT HEAT IT or COOL IT

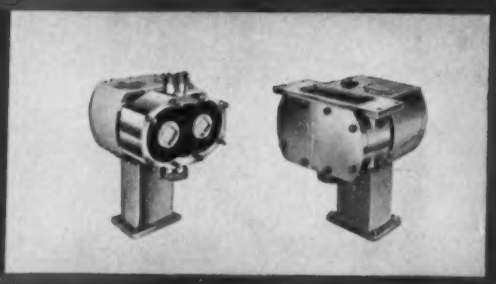
Creamery Package®

EQUIPMENT

can help protect your quality and profits

STAINLESS ROTARY FOOD PUMPS





standard feed pumps—use five resilient rotors that wear in, not out. Single-lobe or five-lobe rotors assure continuous, positive, non-agitating product flow in all capacities. All parts are field-replaceable. Bulletin A-1-500.

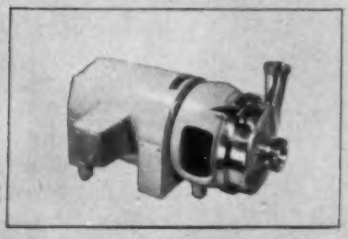
top feed pumps (round inlet) — use single or five-lobe resilient rotors to handle a variety of viscous products such as meat emulsions, potato salad, pie fillings, etc. Capacities from 10 GPM to 100 GPM. Bulletin A-1-500.

top feed pumps (rectangular inlet) — use five-lobe, resilient rotors for viscous products. No. 3 model has 5.3 sq. in. inlet; No. 6 has 27 sq. in. inlet. Hoppers available. Bulletin A-1-500.

HOMOGENIZERS

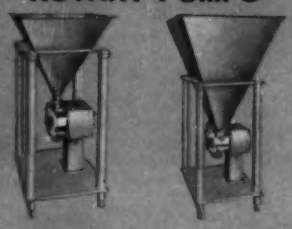
high efficiency units for smooth, uniform homogenization at lower pressures. 3 and 5 cylinder stainless steel models. Capacities from 75 to 7500 GPH at pressures of 2500 psi. Bulletin N-1-100.

CENTRIFUGAL PUMPS



sanitary, stainless — complete size and capacity range to 380 GPM. Match the pump to the job; save money. Fast cleaning and quick disassembly without tools. Pumps both product and cleaning solution. Bulletin A-1-100.

HOPPERS FOR TOP-FEED ROTARY PUMPS



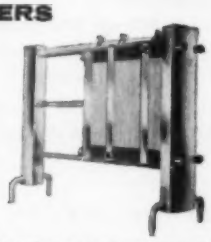
round outlet hopper for top-feed (round inlet) pumps with 2", 2½" and 3" inlets in 130 lb. & 400 lb. sizes. Stainless Steel.

rectangular outlet hopper for rectangular top-feed pumps. Available in 130 lb. for No. 3 & in 200 lb. & 500 lb. sizes for No. 6 pumps. Stainless Steel. Bulletin A-1-500.

MULTI-PROCESS TANKS

multi-use to heat, cool, mix, pasteurize or store. Use hot water, steam, city water, chilled water or direct expansion cooling. 7 styles, 50 to 2,000 gallons capacities. Bulletin B-1-100.

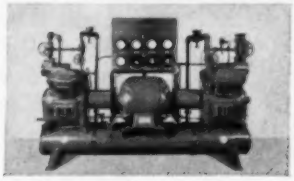
HEATERS and COOLERS



"Swept-Surface" units. Extremely economical continuous heating and cooling of liquids and semi-solids — 30°F. to 300°F. Blades constantly sweep product from heat transfer surface to eliminate "burn-on"; increase product yield. Bulletin D-1-300.

plate heat exchangers. Can be continuous heater, cooler, regenerator, H.T.S.T. pasteurizer — or all four. Meet U.S.P.H. standards. Compact design; Stainless Steel. Bulletin E-1-100.

ENGINEERED REFRIGERATION



CP compressors and boosters; and complete refrigeration systems for every cooling, freezing and storage need. CP experience means economical first cost, lowest operating cost — and complete dependability. Write, and we'll arrange a meeting.

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CREAMERY PACKAGE MFG. CO. OF CANADA, LTD.
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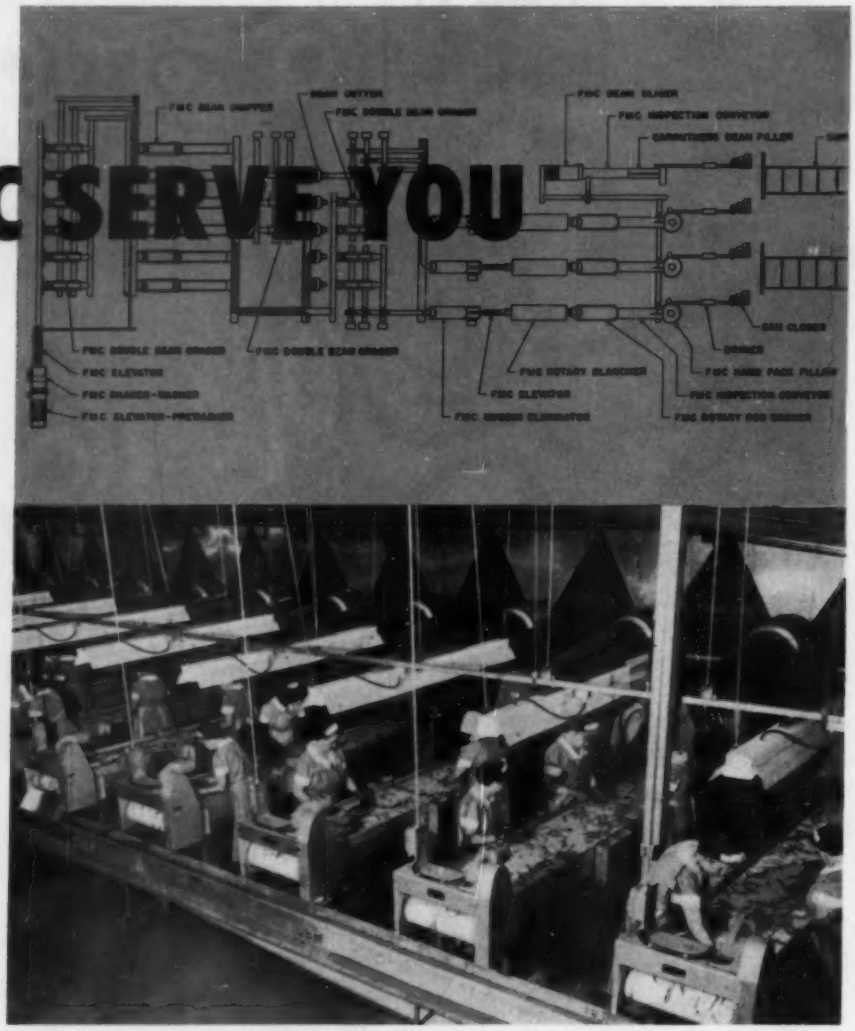
from Planning

to Performance



FMC Bean Equipment installed at Northwest Packing Co., Portland, Ore.

Known the world over for more than 70 years as a leader in the development and production of advanced food preparation and processing machines and equipment, FMC is also recognized throughout the food industries as the most reliable source for progressive engineering and planning services.

Whether your problem involves consultation regarding an improvement in production line performance, the complete planning of a new plant – from floor plan through research and development, operating techniques, machine performance studies and field testing – or assistance in installation and start-up procedures, FMC's broad background of application engineering experience is available. A letter or a phone call will start things moving.

Dedicated to serving the Food Industries through better equipment for better food products.

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:

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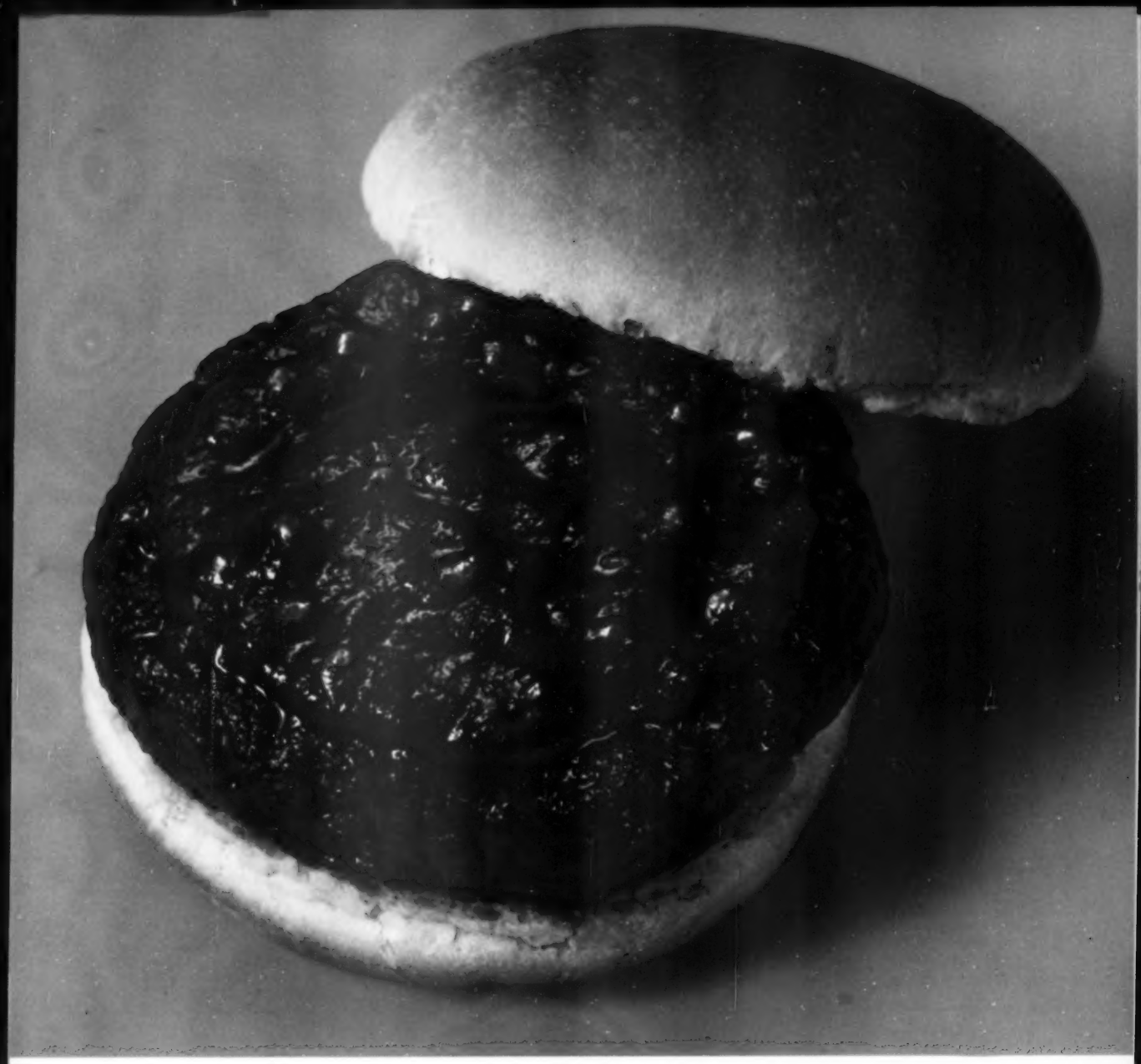

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the color is true with...

CERELOSE®
dextrose sugar

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Corn Products for expert technical assistance...helpful data on these fine products for Canners:

CERELOSE® dextrose sugar · REX® and GLOBE® corn syrups · BUFFALO® and SNOWFLAKE® starches.

CORN PRODUCTS COMPANY INDUSTRIAL DIVISION · 10 East 56 Street, New York 22, N. Y.

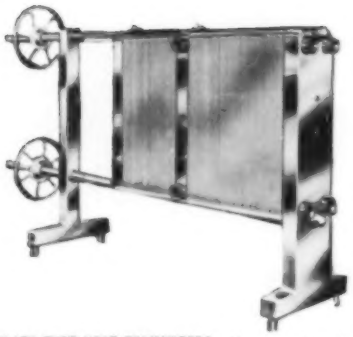
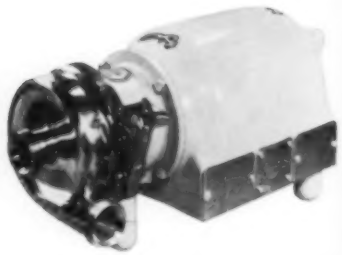


PLATE-TYPE HEAT EXCHANGERS. Heat, cool and regenerate liquids and semi-liquids. Electro-polished knob-type plates set up three-dimensional turbulence for high heat exchange rates without excessive over-all pressure. Port openings in plates extra large to minimize pressure loss. Closed circuit processing. Three models for capacities from 60 to 60,000 g.p.h. Write for Bulletin G-560.

PROCESSING VATS. Five models — seven standard sizes — four types of heating — three types of cooling — three types of agitation. A design for every product application. Can be used for any or all of these processing steps: Heating (atmospheric, vacuum or pressure), pasteurizing, cooling, mixing, blending, cooling, holding, setting, refrigerated storage, air unloading. Write for Bulletin G-566.

FITTINGS, VALVES AND STAINLESS STEEL TUBING. A complete line of fittings and valves for cleaned-in-place or take-down lines. All stainless steel. Flexlok tygon hose connections for connecting tygon hose to sanitary fittings. Stainless steel tubing in 1" through 4" sizes, polished to 180 grit finish, 10' and 21' lengths. Corrosion resistant. Will not release catalytic or oxidizing agents. Write for Bulletins G-613 through G-617.



"FLEXFLO" SANITARY CENTRIFUGAL PUMPS. Type 316 stainless steel. Four models with ¼ through 30 h.p., capacities from 2000 to 210,000 pounds per hour. Entire product end of pump quickly and easily taken apart for cleaning without tools. New hinged clamp ring for protection against distortion through abusive use — assures continued perfect alignment. New design shaft for "O"-ring impeller locking. New balanced rotary seal. Involute design. Flexflo design allows setting the outlet in any position. Flexflo centrifugal pumps also available in industrial unpolished models. Write for Bulletin G-567.

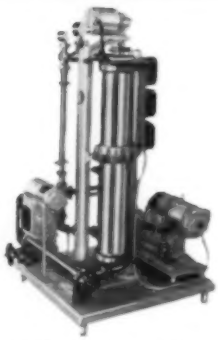
Cherry-Burrell profit-engineered food processing equipment

A complete line for homogenizing, heating, cooling, flavorizing, storing, separating, freezing, mixing, packaging and conveying pumpable products

Write for free food processing equipment catalog.

HOMOGENIZERS. New, all stainless steel models. Single and two-stage homogenizing valves. Plugs and seats of non-corrosive solid Stellite. Perforated, replaceable valve caps take 98% of valve wear. High-speed shearing action, steady pumping pressure assures complete particle-dispersion, prevents globule separation back to pre-homogenized state. Available in 11 models. Capacities from 50 to 6000 gallons per hour. Also "Stellar-Flo" high pressure pumps for spray drying, metering, high-pressure liquid transfer. Write for Bulletin G-585.

THERMUTATOR HEAT EXCHANGERS. Heats to 350° F., cools to minus 50° F. Available with one, two or three tubes. Combinations of heating and cooling tubes for specific applications. All product contact surfaces stainless steel. Choice of heating or cooling mediums. Heat with steam or hot water — cool with city or sweet water, freon, brine, ammonia, dowtherm. Write for Bulletin G-572.



THERMINJECTOR. A new, flexible, completely automatic system for heating and cooking of pumpable products and mixtures. Reduces cooking time to minutes. Enables you to pump product — and cook it — on a continuous, steady rate to the Therminjector's maximum capacity of 3,000 lbs. per hour. Closed circuit operation eliminates possibility of contamination or incorporation of foreign materials. Write for Bulletin G-583.

AUTOMATIC SANITARY VALVES. Air actuated. All stainless steel. Body designs for all applications in automated process and cleaning systems. Write for Bulletin G-615.

CHERRY-BURRELL CORPORATION
CEDAR RAPIDS, IOWA

Apples or "love apples" whatever you package

Continental helps you all the way!

1 Before you pack!

Continental's research goes to work for you in the field and its modern laboratories seeking new and better means of canning.

2 When you pack!

On the scene Continental analyzes immediate and particular problems, and finds the solution that serves you best.

3 After you pack!

Continental serves you right into the marketplace. The Merchandiser Digest adds retail impetus to canned sales every month.

Continental provides a farm-to-kitchen service for food packers across the country. Field experts solve on-the-spot problems of individual growers and canners with scientific skill and imagination, tireless researchers explore and test new and improved methods of processing food, and the famed Continental Merchandiser Digest adds force to canned food selling by bringing important retail hints to over 100,000 supermarkets every month. This total service assures you of the finest container for the food you process, and whatever that food...Continental has the right package for you.

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Pacific Division: Russ Building, San Francisco 4 • Overseas Division: 633 Third Ave., New York 17 • Canadian Division: 790 Bay St., Toronto 1

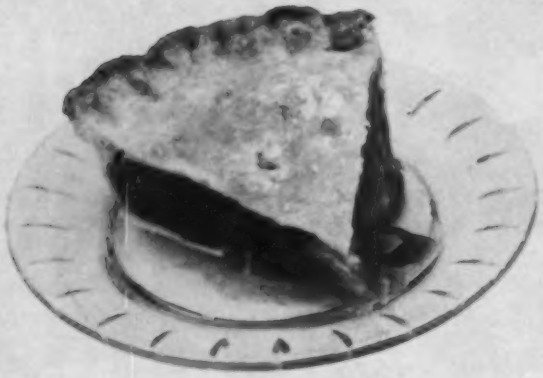
Continental has the right *processed food* package for you!

CANNED VEGETABLES
Prevents pre-processing browning

FRUIT DRINKS
"Peps up" as an acidulant

BABY FOODS
Improves palatability

BREADED SHRIMP
Slows enzyme action;
reduces bacterial growth



FRUIT PIE FILLINGS
Increases fruit content;
improves flavor

CANNED SOUPS
Enhances flavor

CANNED FIGS
Reduces autoclave temperature; improves flavor and texture

MAYONNAISE
Extends shelf life

PRUNE JUICE
Accents flavor

VEGETABLE JUICE COCKTAIL
Adjusts acidity; improves flavor

What can lemon juice do for your product?

These are a few of the processed foods that *look* better, *taste* better and *sell* better, thanks to Exchange Concentrated Lemon Juice.

They range from ocean bottom seafood to treetop fruit.

Your product may be one that can be transformed from "good" to "superior" by the use of lemon juice as a flavor enhancer. Loss from spoilage or discoloration can often be cut—even eliminated—by using it in processing.

Exchange Lemon Juice can be a selling ingredient of distinction on your label at a cost of just pennies. Tell us what your product is. We'll tell you if and how lemon juice can improve it. Just use the coupon.

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- Broad and comprehensive NON-ASSESSABLE policies.
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- Lowest net costs — consistently —for the industry.
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- Modern, efficient canned goods reconditioning service.

Why not gear these CANNERS EXCHANGE advantages into your insurance program? Write us, **today.** No obligation, of course.

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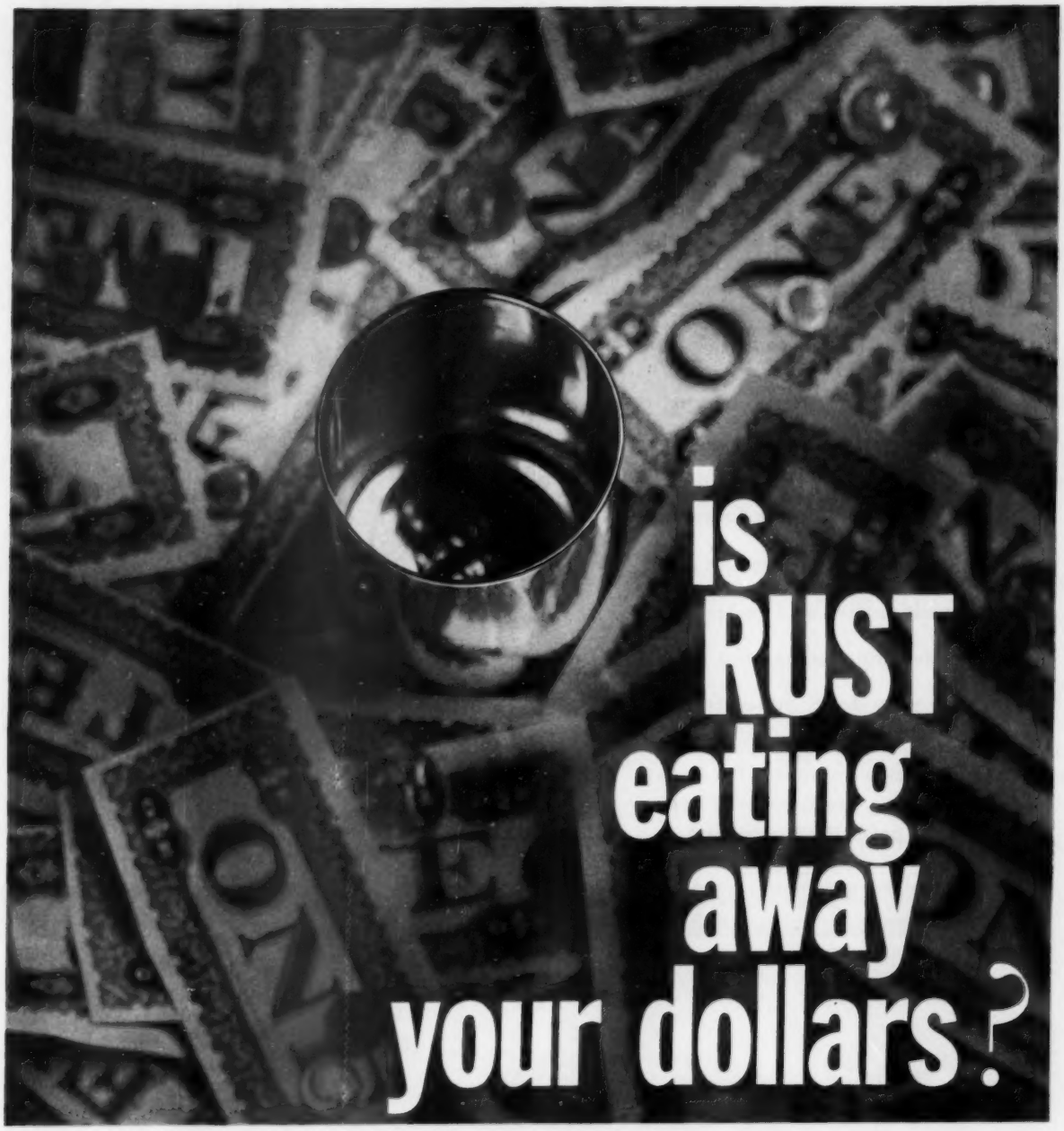
54 YEARS OF SPECIALIZED, DEPENDABLE INSURANCE



You know it is, if cans in storage are rusting before they can be used. Discarding cans because of rust means lost dollars to you. ■ Why not eliminate this annoyance simply, easily, inexpensively with FERRO-PAK Treated Can Bags—the corrosion inhibitor paper guardian that ends can storage problems. ■ FERRO-PAK Treated Can Bags continuously emit an invisible, non-toxic gas, protecting cans from corrosion even when bags are only partially filled and cans not in contact with the inhibitor.

To get this added protection, ask your can supplier to furnish FERRO-PAK Treated Can Bags. Wherever used, even under the most adverse storage conditions, FERRO-PAK Treated Can Bags have done an outstanding job—stopped rust from eating away dollars!

Cromwell paper company

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YOUR ROBINS CATALOG

. . . always ready and waiting to give you information on the latest in

- √ modern food processing equipment
- √ specifications and performance data
- √ cost-cutting processing hints
- √ "how to do it" ideas for increased production

Consult Robins engineers for assistance in solving knotty processing and automated production problems.

If your Robins Catalog is getting worn out—write us for a fresh, new copy.

Here are just a few of the special processing machines designed and developed by Robins to meet unusual or specific processing needs.

Roll-over Tomato Grader—for fast, positive grading without product damage

Thermatic Blancher reduces shrinkage—promotes retention of flavor

Rato Screw Caustic Peeler saves time and reduces peeling losses on root vegetables

Batter-Dipper insures complete uniformity and 100% coverage

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Manufacturers of Food Processing Equipment Since 1855

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Machinery for processing: Apples and Apple Products • Asparagus • Beets • Corn • Dried Beans • Lima Beans • Marmalades • Olives • Onions • Peaches • Peas • Peppers • Pickles • Potatoes (White and Sweet) • Pumpkin • Relishes • Sauerkraut • Shrimp • Spinach • Strawberries • String Beans • Tomatoes . . . plus many operating and maintenance supplies of all kinds, including rubber goods.

Fibreboard's end-loading cases are as easy to open as

1 **Fibre Zip,** the glue-joint shipping case that opens quickly at the pull of a tab.

2 **M.T. Quik,** the glue-joint, flip-top shipping case. Pull the flap; the whole top half flips open. (No digging to remove contents.)

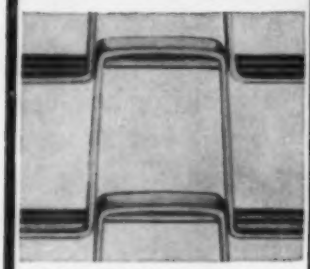
3 **Zip Ease,** the tape-joint shipping case. Pop the end flaps; the top zips open with a special tear-tape. (Closes neatly for storing, too.)

A Fibreboard specialist in *your* industry can help you get increased convenience with end-loading cases. (Plus maximum cost advantages, too.) How? To get information is as easy as writing: **Fibreboard Paper Products Corporation,** 475 Brannan Street, San Francisco 19.

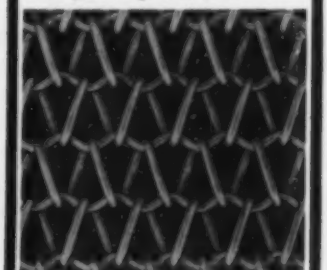
Cambridge Flat Wire Belts

COOK, BAKE, COOL OR FREEZE FOODS FAST AT LESS COST

Call Cambridge for:



Flat Wire Belting 1″ x 1″ mesh (shown), ½″ x 1″ mesh, ½″ x ½″ (modified) mesh in widths up to 12 feet, any length in carbon steel, galvanized steel or stainless steel. Wire widths and rod diameters can be varied to suit your requirements.



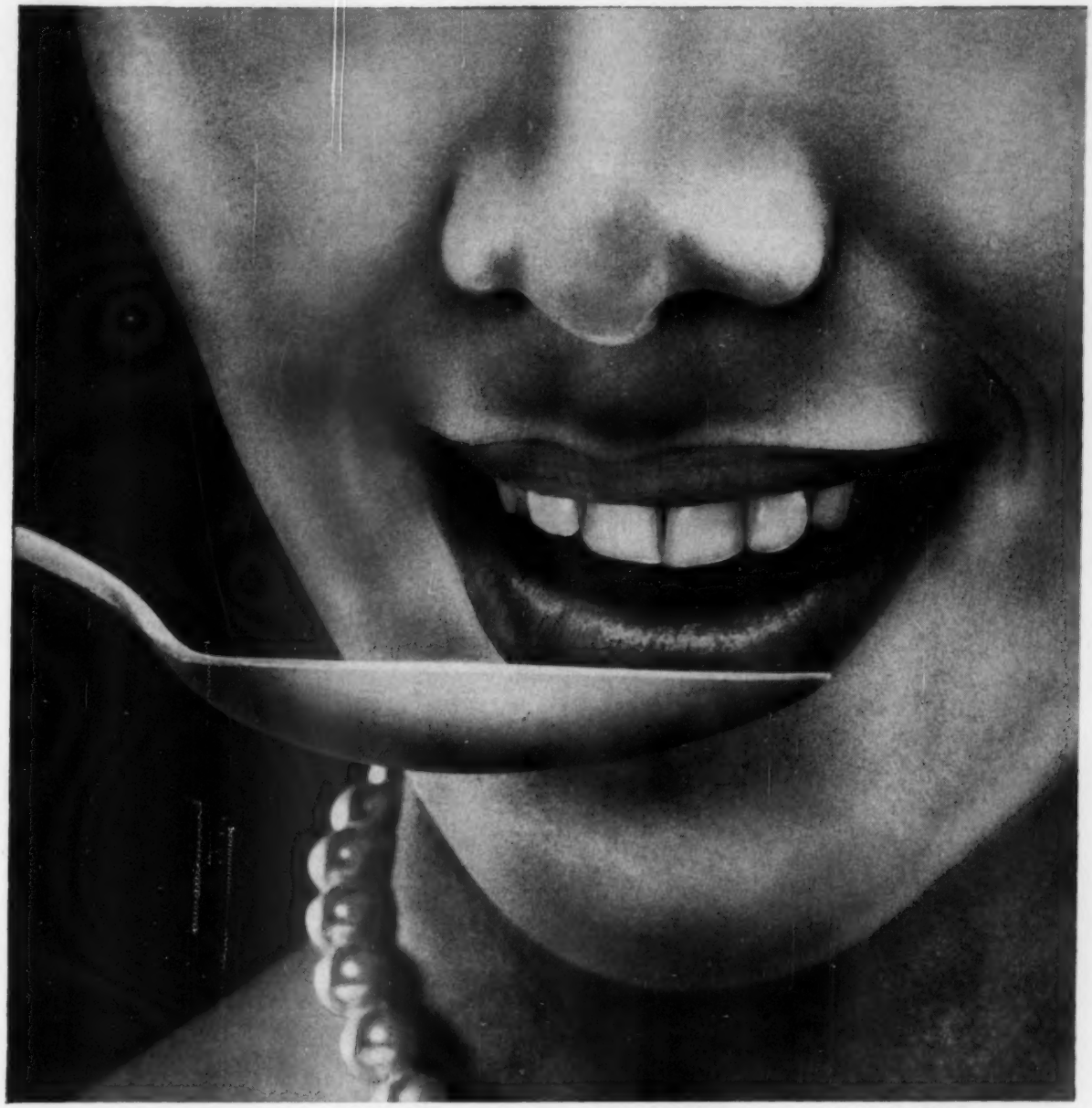
Metal-Mesh Belting Available in special or standard metals or alloys to meet any requirement, custom-built in any weave or mesh size to insure efficient processing. Write for catalog.

Whatever the foods—whatever the processing operation, Cambridge Flat Wire Belts can help you boost production, cut operation costs and maintain high quality standards. Here's how. ■ Large, open mesh allows air or liquids to flow through the belt and around the product for quick, thorough processing. ■ Smooth, flat belt surface carries bottles, cans, cartons, or jars without tripping or spilling, permits easy transfer of products on and off belt. ■ All-metal, anti-corrosive Cambridge Flat Wire Belts permit easy sanitation. ■ Belting can be steam cleaned while in motion to save time. ■ Rugged, quality construction assures longer belt service life, less maintenance, fewer repairs, a minimum of production downtime. ■ Belts may be driven positively with Cambridge sprockets or frictionally with flat-faced pulleys. ■ **For full information on how Cambridge Flat Wire Belts can help you process more high quality foods at less cost to you, call your Cambridge Field Engineer. He's listed in the Yellow Pages under "Belting, Mechanical." Or, write direct for technical data.**

The Cambridge Wire Cloth Co.

Department CP • Cambridge 9, Maryland

Manufacturers of Metal-Mesh Conveyor Belts, Flat Wire Conveyor Belts, Wire Cloth, Wire Cloth Fabrications and Gripper ® Metal-Mesh Slings.



IMPROVE FLAVOR AT RETORT TEMPERATURES WITH STABILIZED HVP-PROZATE

If you process meats, soups or other canned goods that are subjected to high retort temperatures, look to HVP-Prozate for heat-stable flavor.

Prozate® is a hydrolyzed vegetable protein flavoring agent that has been specially stabilized to withstand high temperatures. It is derived from plant protein and imparts either a rich, meaty flavor or a pleasant background flavor, depending on concentration. Prozate is easy to use, can be quickly incorporated into your present formula, and a little goes a long way.

In addition to HVP-Prozate, Hercules offers a full line of other HVP® products tailored to meet the specialized needs of the food industry. For details about Prozate and a sample of it—or for technical help—write to Hercules.

HERCULES POWDER COMPANY
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CH61-2

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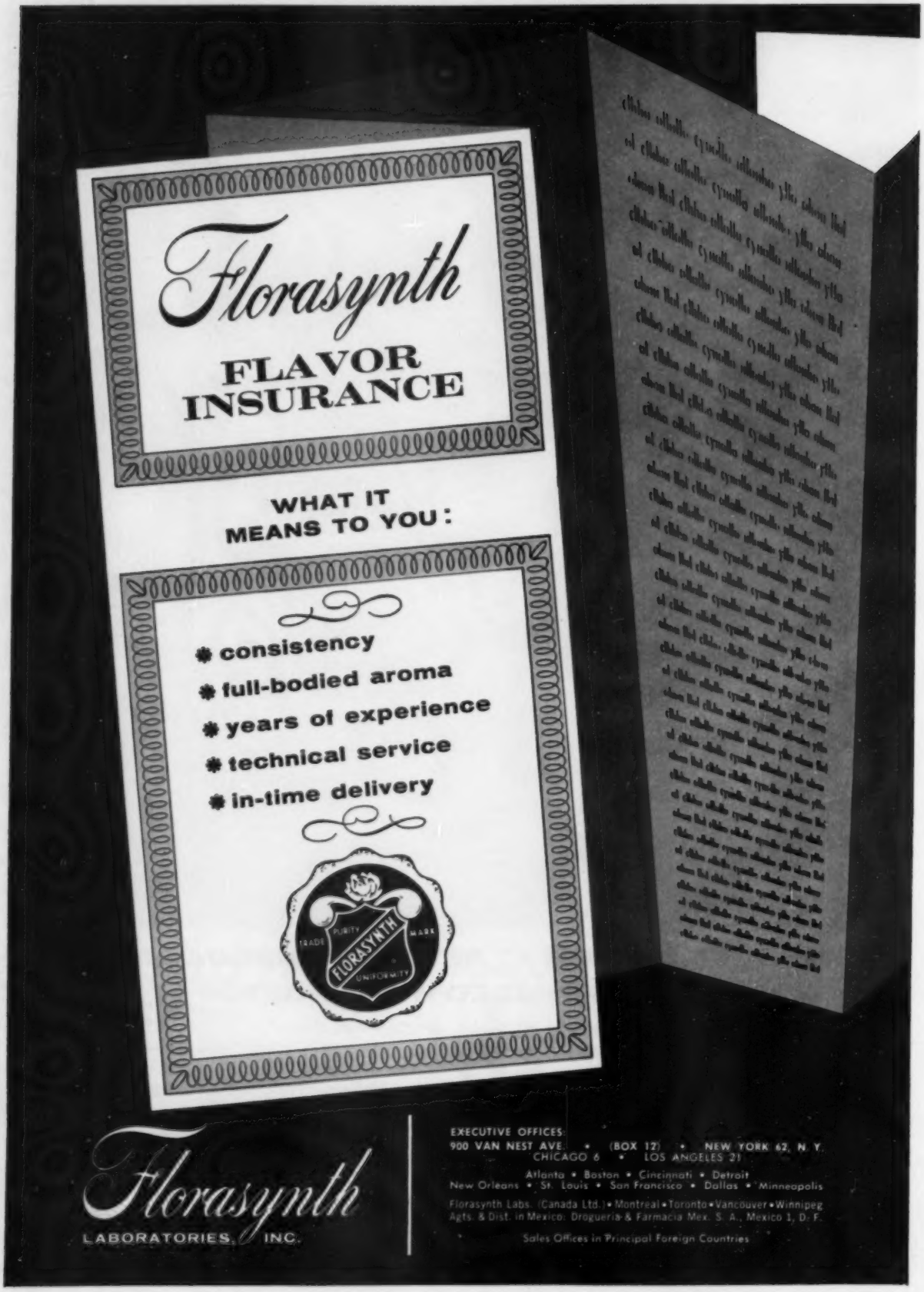
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FLAVOR INSURANCE
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* years of experience
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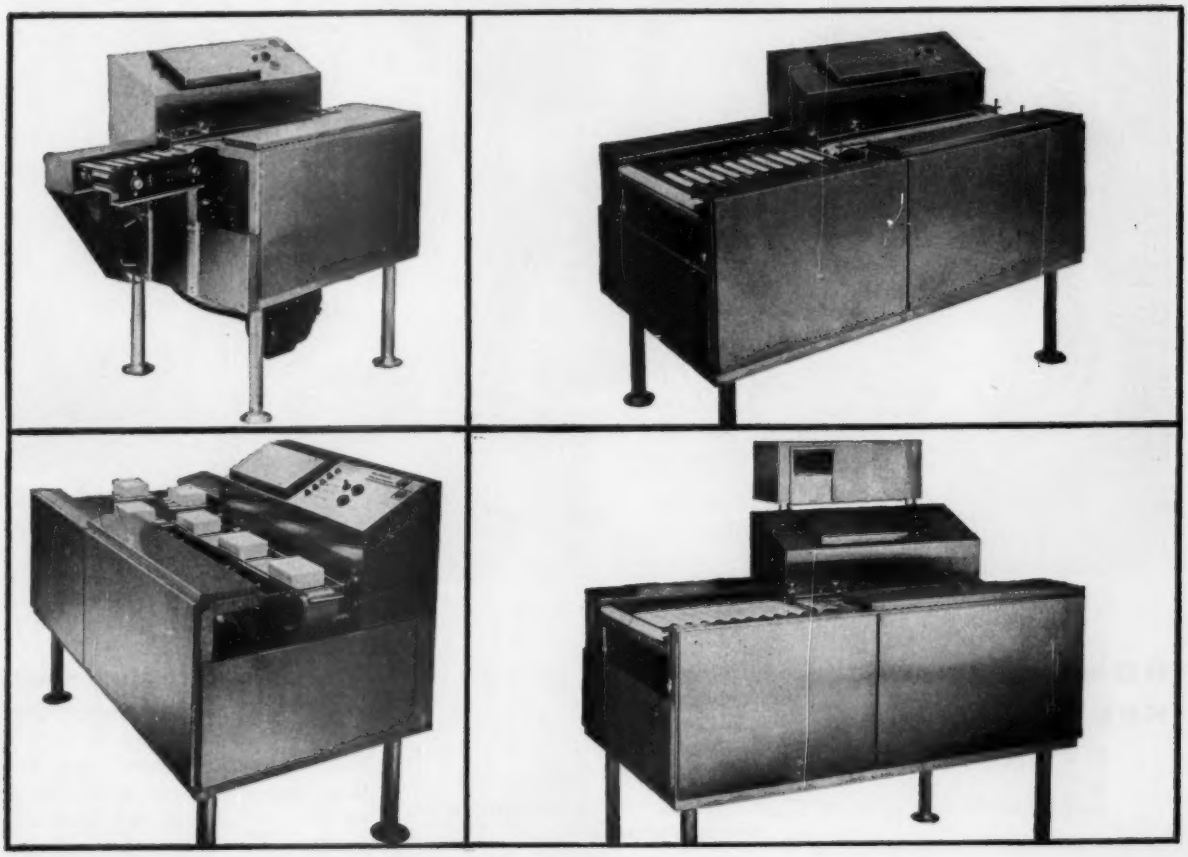
"WORK HORSES"

When the line runs, capacity counts! Illumitronic Checkweighers . . . Weight Monitors and Classifiers are rugged, accurate, and consistent performers in demanding environmental conditions. These machines are operating with cartons, bags, cans, pouches, tubes, trays, overwraps, blow-mold plastics, and products unsupported by packages. Speeds to 300 units per minute. Accuracy ±1/30th of 1 oz. Weights to 10 lbs. Investigate the economies of *automatically weighing in motion with featherweight accuracy!*



Write—or dial 415, RE 9-2395

illumitronic systems corp.

680 East Taylor Sunnyvale, California

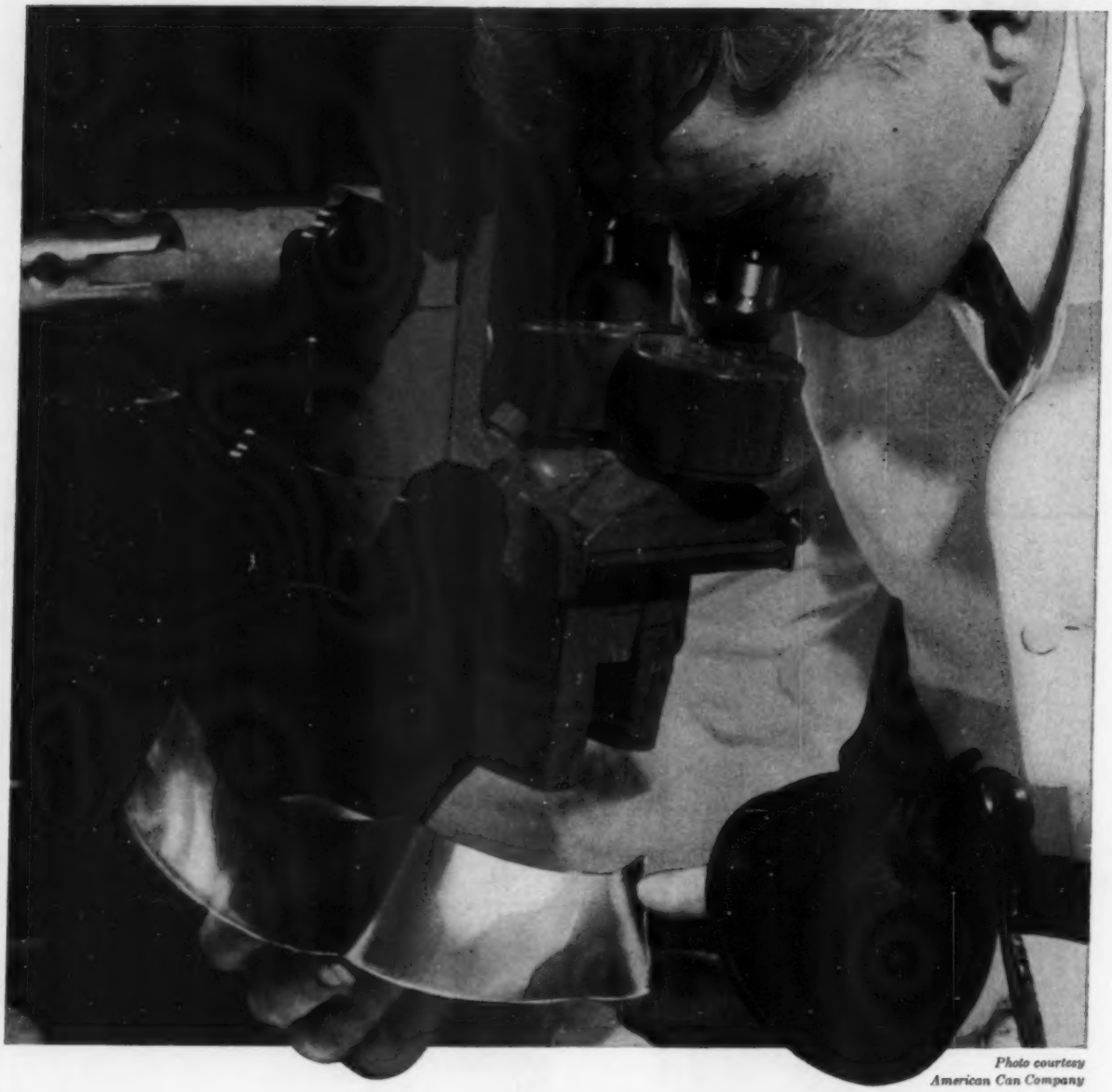


Photo courtesy American Can Company

HOW RESEARCH KEEPS TINPLATE EVER-NEW!

Tin cans have been in successful use for over 150 years; yet they are ever-new. Constant research and development by tin producers, tinplate makers, and can manufacturers results in new and better rigid containers for packers and consumers of—

• FRUITS AND VEGETABLES • BEER • SOFT DRINKS • COFFEE • PET FOODS • EVAPORATED AND CONDENSED MILK • LARD AND SHORTENING • SEAFOOD • OTHER FOODS, INCLUDING SOUPS AND BABY FOODS

Recently developed thinner gages of tinplate can cut weight almost in half. These new materials, with ¼-lb. electrolytic tin plating, are available for citrus juices, beer, soft drinks, motor oil and seafood.

Only tinplate offers these advantages: economy; strength and rigidity in any size; durability; no effect on taste of contents; noncorrosiveness; ease in mass handling—no breakage; ease of display, stacking, stocking or storing; compactness; no light damage to contents.

Neither aluminum, glass, paper, or plastic can match this winning combination of protective qualities.

THE MALAYAN TIN BUREAU • Dept. S-49J, 2000 K St., N.W., Washington 6, D.C.

FILLING
HORIX
PASTEURIZING • COOLING

Shown here are just a few of Horix's complete line of Filling and Processing Machines.

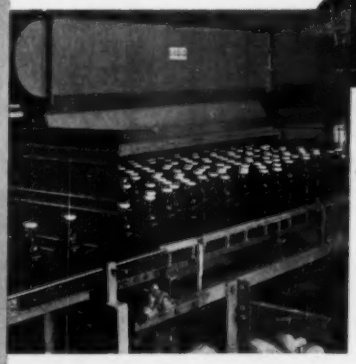
HORIX offers a full line of automatic, semi-automatic and hand-operated fillers for handling liquids and semi-liquids into any size and shape container.

HORIX Processing Units are built as Coolers, Pasteurizers, Cookers and for combinations of these processes. Thermal Control System assures quality with positive equal treatment of every container.

FOR BOTTLING

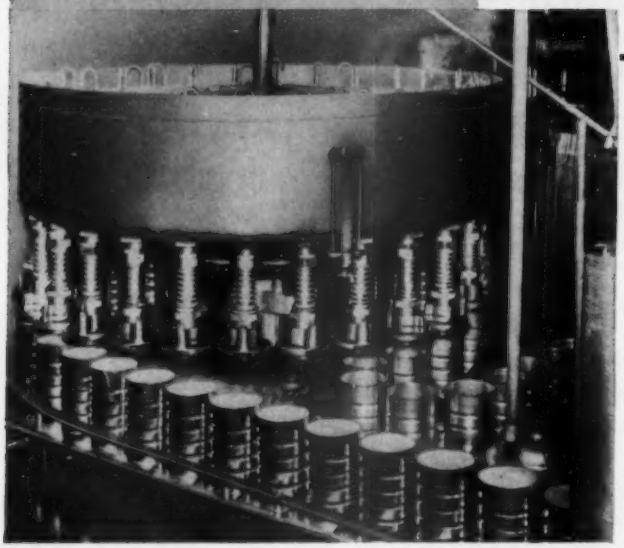
HORIX FILLER MODEL HB-9-18

A versatile machine for handling many different products into any shape or size container from pints to gallons. Fill may be by gravity, gravity vacuum or pressure gravity, depending on product and container requirements. Every Horix provides extreme accuracy of fill and individual container control. There is no overflow and return system.



HORIX WALKING BEAM MODEL WB-6

Furnished as a Pasteurizer, Cooler, or Exhaust Box. Positive control keeps containers evenly separated from entry, through processing, to discharge—no glass-to-glass contact. Widths 4', 6', 10', 12'; lengths to your requirements. Discharge end shown here with volume dryer.



HORIX FILLER MODEL HAS-28

The filler that sets the standard for filling juices and concentrates into cans from 202 to 404. Holds accuracy record for filling citrus juice into 46 oz. cans. Accuracy maintained for life of machine. May be used with any appropriate can-closing machine.

FOR CANNING

HORIX ROLL-THRU MODEL RT-1-4

Designed for uniform processing of all can-packed products. Action is a slow, gentle roll, reversing itself at end of each runway. Saves floor space. Tandem units available for consumer sizes.

Write for descriptive literature.

HORIX
MANUFACTURING CO. • PITTSBURGH 4, PA.

STYLE SA MIX COOKER Standard SA Mix Cooker has either single motion or double motion agitator with or without hydraulic lift. With hydraulic lift agitator lifts easily and smoothly out of cooker. Sizes range from 30 to 500 gallons.

STYLE PC Stainless steel pressure cooking kettle, designed especially for meat and poultry processing. Balloon jacket gives increased heating capacity. Built for 90 p.s.i. in jacket and 15 p.s.i. in kettle. Has quick opening latches. Top is lifted by eccentric lever. Sizes 30-250 gals.

STYLE CW MIX COOKER Large diameter gives fast even cooking. Hydraulic Lift tilts agitator smoothly and easily out of tilting kettle. Available for 40, 90, 120 pounds steam working pressure.

HAMILTON

puts everything in the kettle except the product!

STYLE CW Designed to process large batches up to 150 gallons. Positive worm gear and hand wheel give complete control of large capacity loads while tilting. Large diameter kettle gives fast, even cooking. Sizes from 30 to 150 gallons.

- LOW INITIAL COST
- SUPERB WORKMANSHIP
- LONGER LIFE
- LOW OPERATING COST
- SANITARY DESIGN
- ADVANCED FEATURES
- SANITARY CONSTRUCTION

HAMILTON KETTLES are good for your product. They're designed to produce batch after batch of consistent quality, texture and flavor. We illustrate only a few of the many models available in conventional and steam jacketed, with or without agitators. Free Catalog available by writing to Hamilton Kettles, Cincinnati, Ohio.

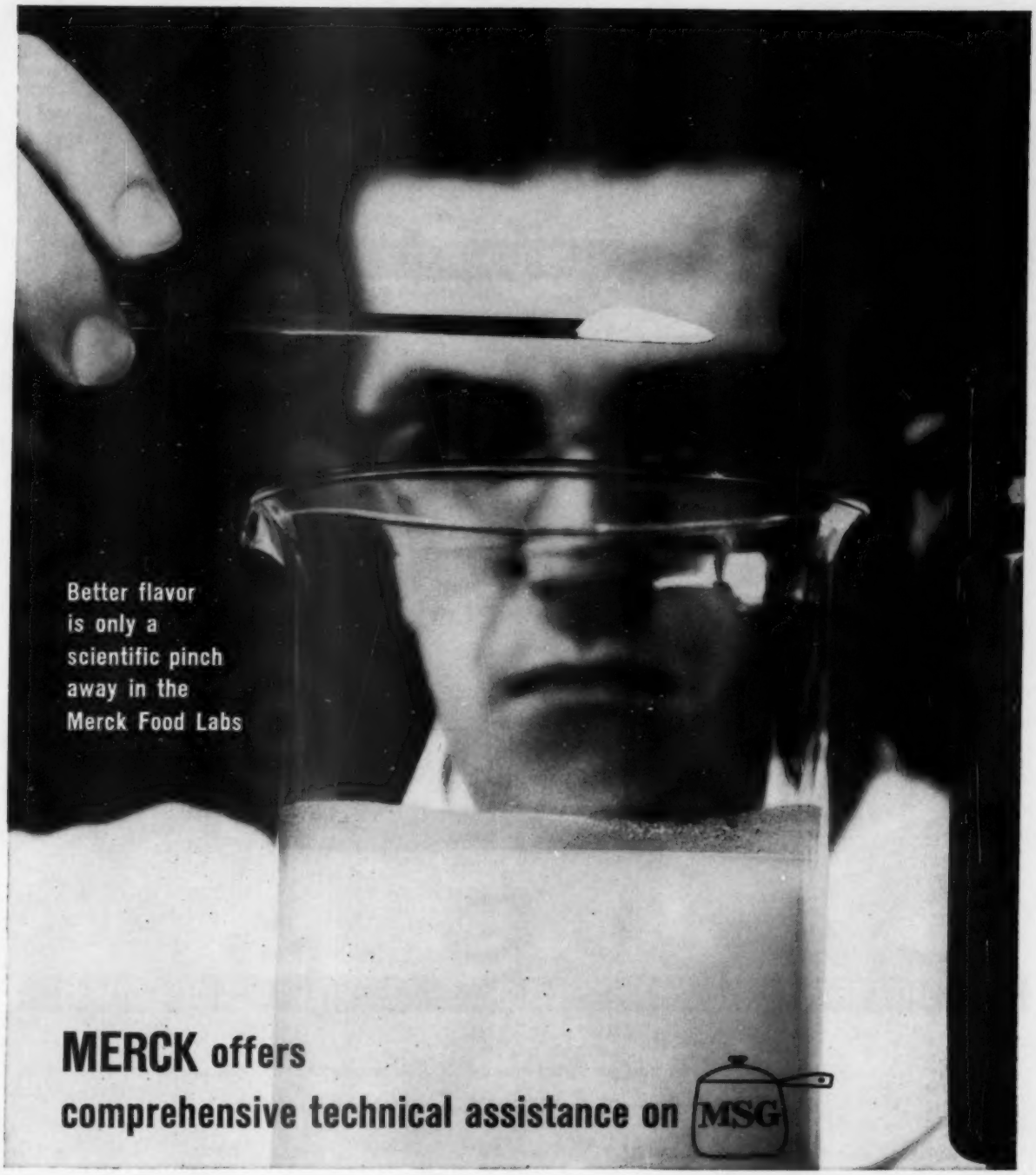
LOOK AT THIS NEW HAMILTON DESIGN A triple duty agitator for absolute maximum agitation. Can easily be installed in Hamilton style A, SA or CW kettles.

ESTABLISHED 1876

HAMILTON Kettles

DIVISION OF BRIGHTON CORP.

820 STATE AVENUE
CINCINNATI 4, OHIO



MERCK offers comprehensive technical assistance on MSG

It doesn't always take a major change in formulation to effect an improvement in a food product's flavor. Sometimes it can be done with the equivalent of a pinch of MSG . . . or a slight modification in formula to get the most out of the MSG that is already in the product. It's all a matter of experience with MSG and a desire to work hard for the right answer.

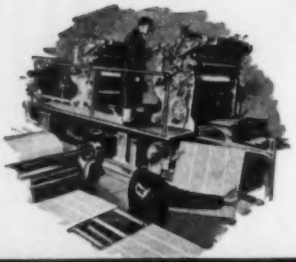
You'll find specialists in the Merck Food Laboratories strong on both counts. This creative group offers a broad range of technical services relating to the use of MSG, from evaluating your new product formulations to improving flavor of your existing products.

Just as a reminder, Merck is in a better position than ever before to satisfy your appetite for MSG. A $2 million plant expansion has increased production capacity for Merck MSG by 100%. For details on delivery of MSG or technical assistance on its use, simply call your Merck representative.

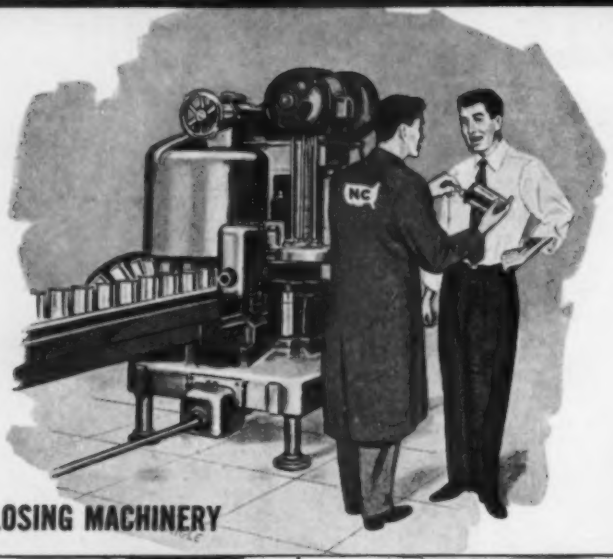
MERCK CHEMICAL DIVISION
MERCK & CO., INC. · RAHWAY, NEW JERSEY

PRODUCT RESEARCH

ENGINEERING



LITHOGRAPHY



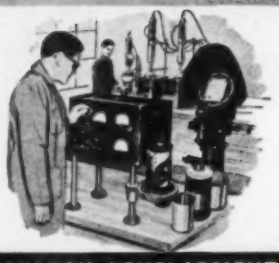
CLOSING MACHINERY

NATIONAL CAN

Personal Service

SALES SERVICE

DESIGN



RESEARCH DEVELOPMENT

Combine a keen and personal interest in your products and your processes with our sincere desire to be of help . . . and you have *NATIONAL CAN'S — "Personal Service!"* Why not let us survey your needs — you'll see how much more you get from NATIONAL CAN.

NATIONAL CAN CORPORATION

CHICAGO • NEW YORK • SAN FRANCISCO . . . PLANTS FROM COAST TO COAST

Keep Faith with Nature—Guard her Goodness

Standardize—don't jeopardize. Nature never standardizes vitamin C content. Vegetables vary—uniformity varies. Nature's never uniform. Your juice blend should be. Guarantee vitamin C potency. Keep quality high to satisfy.

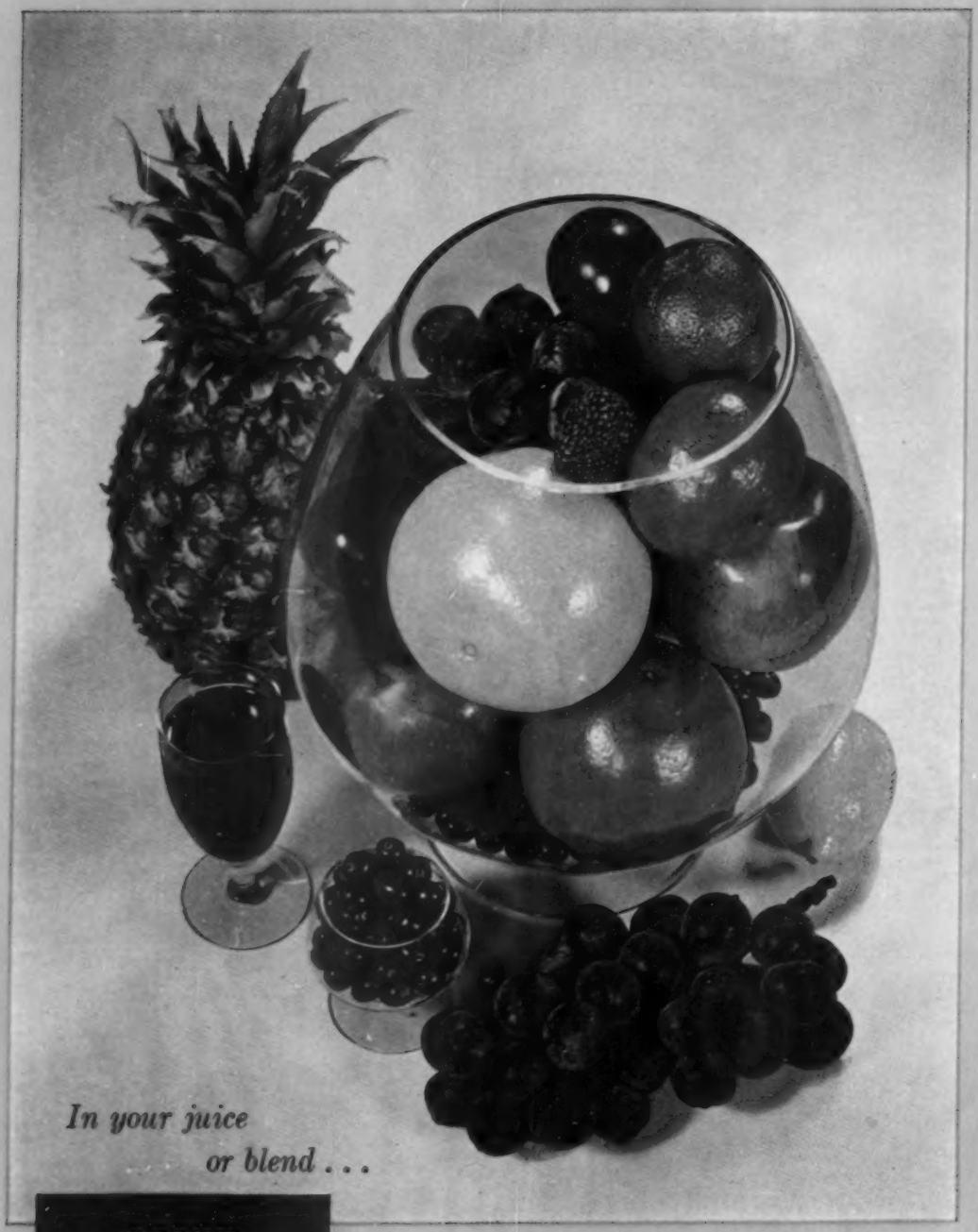
Standardize—don't jeopardize. Standardize with Roche vitamin C (ascorbic acid)—and capitalize on giving your juice blends: acceptable vitamin C levels, added flavor richness (because you can process vegetables at their flavor peak), a nutritional value to claim on your label.

Standardize on Excellence with **ROCHE®** Ascorbic Acid

FINE CHEMICALS DIVISION **HOFFMANN-LA ROCHE INC.** Nutley 10, New Jersey

©1960 HLR INC.

Keep Faith with Nature—Guard her Goodness



ROCHE VITAMINS
cost just a fraction of a penny per serving

ROCHE VITAMINS
can bring you increased dollars in sales

STANDARDIZE—*don't jeopardize*

Nature never standardizes the vitamin C content of fruits. Nature's never uniform. Uniformity varies. So *standardize*—don't jeopardize—juice uniformity!

Standardize on juice excellence, with Roche® vitamin C (ascorbic acid). Capitalize on quality. Give fruit juices and blends: acceptable vitamin C levels, ripe-fruit-flavor richness, a nutritional claim for your labels.

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FINE CHEMICALS DIVISION **HOFFMANN-LA ROCHE INC.** Nutley 10, New Jersey

Shuttleworth

DESIGNED BY CANNERS FOR CANNERS

SOMETHING NEW!!

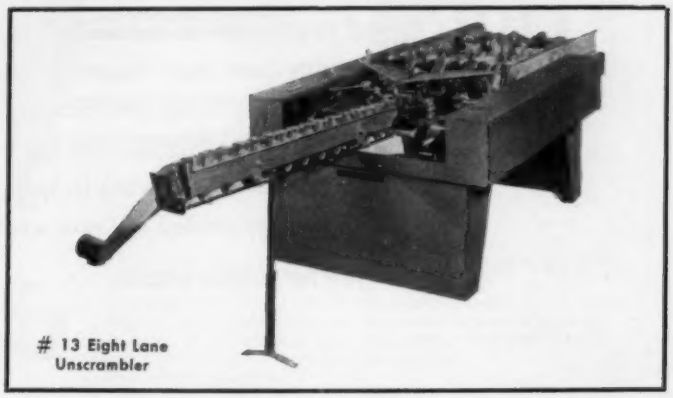
MODEL #13—HIGH SPEED

EIGHT LANE UNSCRAMBLER

The Model #13 is the perfect machine to feed a high speed labeling or production line. Handles such delicate products as fancy whole tomatoes, asparagus tips, sweet potatoes etc., with unmatched gentleness.

★ ★ ★ ★ ★ ★ ★ ★

There are also three other models of Shuttleworth Unscramblers all designed to cut your costs in half by more production with less labor. Completely adjustable and all are portable. All are extremely gentle, and we guarantee they will not dent cans.



13 Eight Lane Unscrambler

Also Check These . . .

AUTOMATIC RETORT CRATE UNLOADERS

There are five models of Shuttleworth Crate Unloaders that are **guaranteed not to dent cans!** All combine a one man operation with adjustability from 202 to 404 inclusive and will feed any make unscrambler.

An adjustable Unscrambler to feed a HIGH Speed Labeling Line

Check these benefits . . .

1. Speeds up to 1200 cases per hour.
2. Adjustable from one size to another in minutes.
3. Adjusts from 202 to 404 inclusive.
4. Gentle—will not dent cans.
5. Portable—Mounted on rubber wheels.

IMMEDIATE DELIVERY

Shuttleworth production planning has been based on personal experience with the **canners needs.** We are in position to ship a limited number of machines for delivery in time for this season's pack . . . Check those lines and make certain that your **can handling equipment** is in tip top shape. Then contact your nearest Shuttleworth representative.

Write, Wire or Phone 190

SHUTTLEWORTH, INC.

WARREN, IND.

DISTRICT SALES MANAGERS

EAST: Bill Rombin, Fairfield Pa.—Phone 912 R13
MIDWEST: Jim Shuttleworth, Warren, Ind.—Phone 190
WEST: Jim Gilfillan, Bellevue, Wash.—SH 6-3265

TRI-CLOVER

Products and Experience can help Automate your Processing Operations

Automation of food processing operations is becoming an increasingly important factor in determining over-all production capacity, and can be a contributing factor in the profit "picture" throughout the food industry.

Tri-Clover Division has been actively engaged in the development and application of automated flow control systems. Established products have been improved and new products have been added to help bring production flow under positive control. And, complete facilities for the design, engineering and plant layout assistance needed to help you process the most product per man-hour expended are now available to you.

Write for further details.

NEW "PR" SERIES POSITIVE ROTARY PUMPS

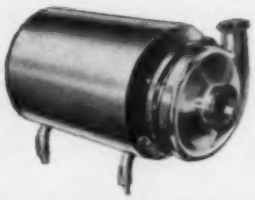
This new high-efficiency series offers many exclusive features, including: FLOATING IMPELLER DESIGN; UNIQUE STATIC O-RING SEAL . . . FULLY ACCESSIBLE; RE-USABLE O-RING COVER GASKET; SEPARATE COMPARTMENT FOR OIL-LUBRICATED GEARS . . . and a popular size range including capacities of 3, 10, 25, 60, 125 and 300 gpm.

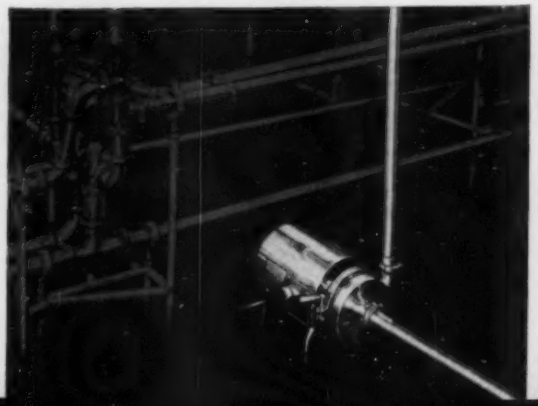
WRITE FOR BULLETIN "PR 260"

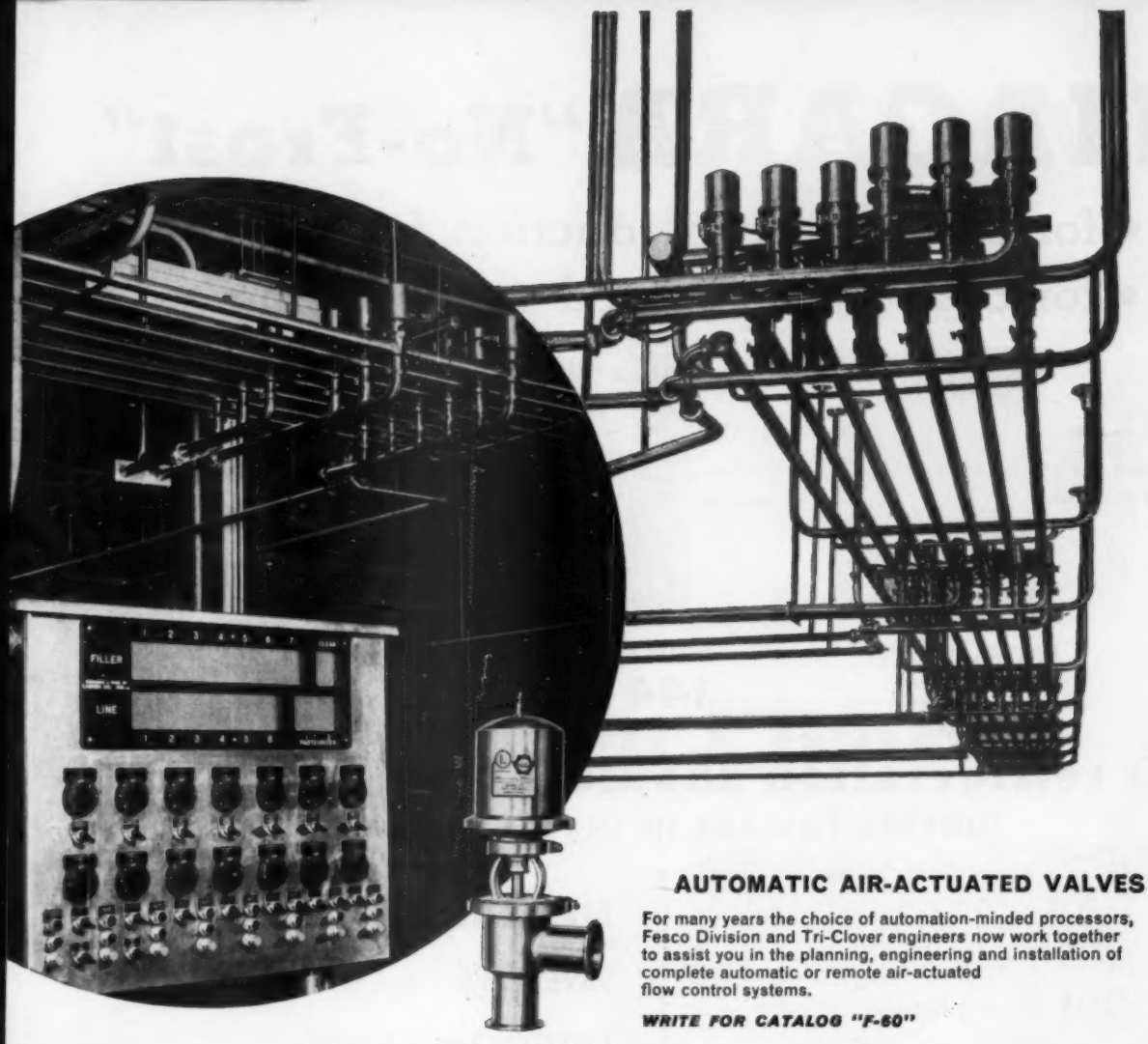
NEW "CIP" PUMP

This Tri-Clover Centrifugal Pump combines clean-in-place convenience with the efficiency of a fully developed volute-type head, one piece impeller and shaft, and one piece internal seal. It's a new concept in sanitary centrifugal pumps aimed at continuous "CIP" service.

WRITE FOR BULLETIN "CIP 260"





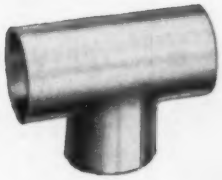


AUTOMATIC AIR-ACTUATED VALVES

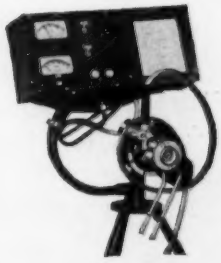
For many years the choice of automation-minded processors, Fesco Division and Tri-Clover engineers now work together to assist you in the planning, engineering and installation of complete automatic or remote air-actuated flow control systems.

WRITE FOR CATALOG "F-60"

"TRI-CLAMP" Fittings



"TRI-WELD" Fittings



"TRI-WELDER" Portable Welding Unit

AUTOMATION-ENGINEERED FITTINGS

A continuing program of product development and improvement has resulted in expansion of the Tri-Clover line of plug valves, sanitary stainless steel tubing, fittings and centrifugal pumps. Snap action TRI-CLAMP® take-down fittings, TRI-WELD® welded fittings and the TRI-WELDER® are fast becoming major cost reduction factors throughout the food industry.

WRITE FOR LITERATURE

LADISH CO.
Tri-Clover Division
Kenosha Wisconsin

TRI-CLOVER

In CANADA: Brantford, Ontario
EXPORT DEPARTMENT: 8 South Michigan Ave, Chicago 3, Illinois.
Cable TRICLO, CHICAGO

6361.

NIAGARA "No-Frost"®

- for continuous production freezing
- for SAFE frozen food warehousing

WRITE for these bulletins

BULLETIN 105 on automatic "No-Frost" for pre-cooling, food freezing and warehousing.

BULLETIN 144 on continuous production food freezing.

BULLETIN 119 for getting "No-Frost" benefits from your present equipment.

NO refrigeration should EVER form frost

(UNLESS YOU ARE IN THE ICE BUSINESS)

FROST

STEALS your plant capacity

RAISES your operating costs

ROBS your product quality
(IT CAUSES TEMPERATURE, HUMIDITY AND AIR FLOW TO FLUCTUATE)

WASTES your labor
(IN NON-PRODUCTIVE DEFROSTING CYCLES)

Makes your plant **HARD TO CLEAN**

FROST COSTS YOU MONEY EVERY DAY

NIAGARA "No-Frost"®

SAVES power for you

PROTECTS your quality
(ASSURES CONSTANT BELOW-ZERO TEMPERATURE, STEADY AIR FLOW, CORRECT HUMIDITY)

SAVES upkeep expense

PREVENTS maintenance troubles

SAVES labor and over-time
(IT'S FULLY AUTOMATIC)

"No-Frost"®
INCREASES YOUR PROFIT

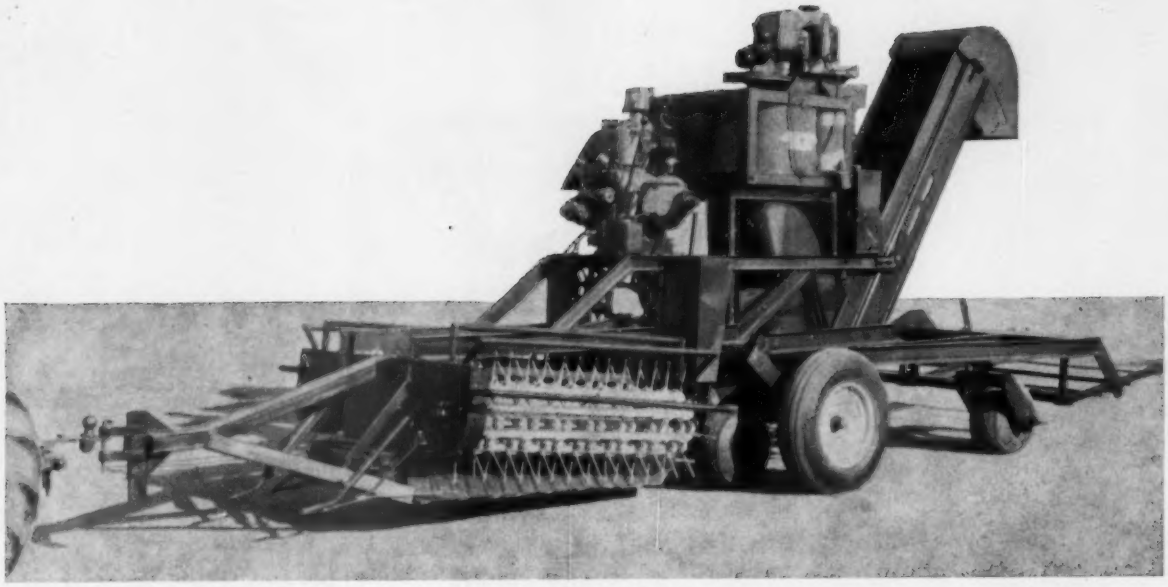
® TRADE MARK REGISTERED U. S. PATENT OFFICE

NIAGARA "No-Frost"® dependability is assured by 30 years successful performance.

Write for "No-Frost" Bulletins, address:

NIAGARA BLOWER COMPANY Executive Offices: *405 Lexington Ave., New York 17, N.Y.*

Field Engineers in Principal Cities in U. S. & Canada



Profit with a Pull-Type

Paulson Picker

☆ Mobile—Use any 2-3 plow tracters—easily transported by trailors . .

☆ All V-Belt Friction Drive — Eliminates chains, gears, slip clutches and shear pins.

☆ Trouble-Free Picking Reel—Large diameter with vibrating strippers reduces wrapping of vines weeds — Metal clip on tines cuts tooth breakage.

☆ Adjustable Discharge — Leaves deposited at desired distance by adjustable baffle.

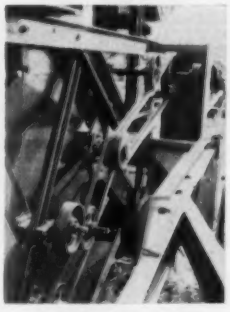
☆ Economical Conveyor System—Friction driven, rubber cleated main belt inexpensively replaced in 30 minutes.

☆ Independent power supply — 2 Wisconsin engines power fan and reels and conveyors —allows operator to suit reel speed to foliage and ground speed.

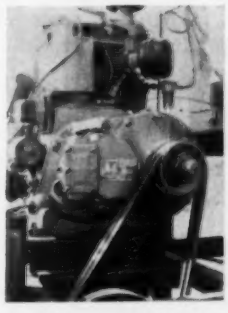
See these advantages

1. Adjustable Discharge

2. Trouble-Free Reel



3. All-Friction Drive



4. Wisconsin Engine

Manufactured by

Paulson Brothers Industries, Inc.

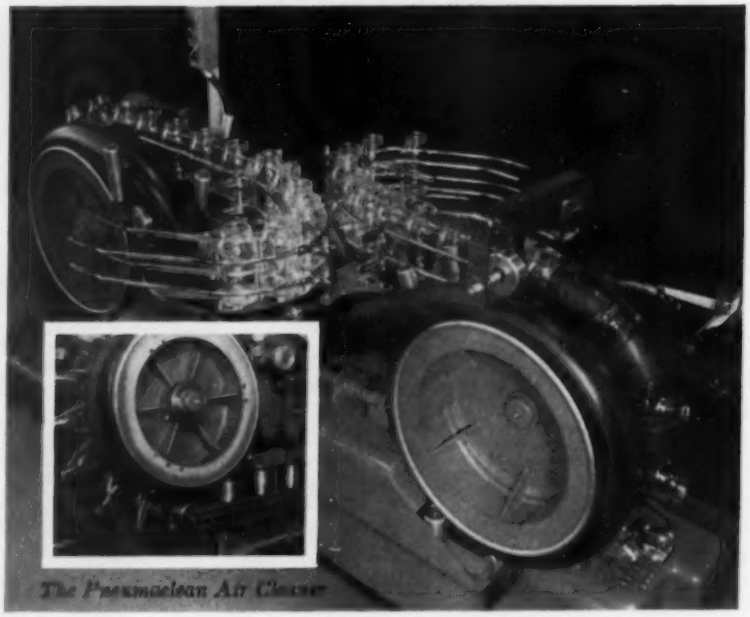
Clear Lake, Wisconsin

WHILE IT TRAVELS ON A CUSHION OF AIR?

The revolutionary Pneumaclean! Based upon a unique and exclusive handling concept — resilient, continuous neoprene tubes — the Pneumaclean effortlessly cleans 500 containers per minute using the forces of gravity coupled with air pressure.

Here's how: neoprene pillows of air tubes firmly grip the containers as they whirl around the drum pulleys. Centrifugal force and gravity dislodge heavy matter from the inverted containers, which are then blasted free of dust, lint, and other remaining particles by a powerful "10 for 1" air jet system.

Pneumaclean efficiently speed-cleans glass, metal, or fiber containers in nearly every shape and size . . . short, tall, round, oval, tapered or wide-mouthed. Major producers (names on request), quick to see the value of this remarkable machine, are converting. A Pneumaclean unit can increase the output and efficiency of *your* production line too, while it cuts your costs per container. Write for full details.



Packaging and Bottling Equipment

PNEUMATIC

PNEUMATIC SCALE CORPORATION, LTD., 79 Newport Avenue, Quincy 71, Mass. Sales Offices: New York; Chicago; Dallas; Rochester. Agents: Fred Todt Company at Los Angeles, San Francisco and Seattle. Rockwell Pneumatic Scale Ltd., London, N.W. 2, England, O. R. M. A., Paris 8, France. Carbert Manufacturing Co. Division, Cambridge, Mass., Delamere & Williams Co., Ltd., Toronto.

Gold Medal Equipment and Supplies Indicies

Packers and Suppliers Profit from Regular Communication 47

Industry meetings offer programs which are usually beyond the scope of individual companies — By William E. Vaughn, president of the C.M.&S.A.

1961 Gold Medal Awards 48

The top developments—new or improved equipment or supplies—announced since May 1960.

Alphabetical List of Suppliers 53

The 730 names and addresses of manufacturers of equipment and supplies for food processors.

Classified List of Suppliers 65

Names of suppliers, listed under 230 categories of food equipment and supplies in nine sections.

Bulletins and Catalogues 94

Literature of 100 manufacturers of equipment and supplies in the food industry.

No, But He Knows What He Likes! Maybe his tastes run more to pot roast than to pâté de foie gras, but he and millions like him know instinctively when a flavor is "right". It takes a lot of experimenting to find the right flavor for a certain product. It takes a good working relationship between manufacturer and flavor supplier. It takes proper testing. And experience. In Felton's case, you can count on over 38 years of experience with flavors. The man from Felton has one aim: to find the flavor that best suits your product, the flavor that best sells your product and keeps them asking for "seconds". Felton Chemical Company, Inc., 599 Johnson Avenue, Brooklyn 37, N. Y.

Felton

GOLD MEDAL
FOR CREATIVE PROGRESS IN PROCESSING FOODS

Packers and Suppliers Profit from Regular Communication

By William E. Vaughn

In the Machinery and Supplies Industry, research and development are as much a part of business as production and sales. Before a Food Processor can provide consumers with new and improved products, the machinery, supplies and procedures must be successfully developed, researched and, above all, be available.

As our rapidly increasing population demands more and more processed foods, the machinery and supplies industry must, as always, continuously plan ahead in order to offer the food processing industry more mechanical devices. Typical examples are the developments in mechanical harvesting devices used for both tree and vine, the new methods for handling the product from field to factory, and the improved procedures and equipment for cleaning, inspecting and preparing foods. Product handling devices have been engineered to operate at extremely high speeds and with incredible accuracy. High speed filling and closing equipment provides endless stream of containers for the efficient processing units. Labeling, casing, warehousing, and inventory control have also produced their share of new developments.

It is interesting to note that our responsibility is not limited to the Food Processing Industry alone. Many techniques and procedures developed for foods are also being utilized in other fields, such as the beverage, petroleum, chemical and pharmaceutical industries. Thus, as the machinery and supplies industry continues to broaden its base and concepts, the sum total of information developed offers new production horizons.

The ever expanding responsibilities of the Canning Machinery and Supplies Industry in serving the more than 3600 food processing establishments are spotlighted each year when the Canning Industry issues its annual Pack Statistics. The industry produces canned food with an estimated value of $5 billion and in so doing, utilizes more than 22 billion metal and glass containers and expends more than $100 million for new equipment and buildings annually. Many of the canning firms also produce frozen and other types of food products.

As our statistical reporting adds more and more information to the record of industry accomplishments, individual companies—both processors and suppliers—become faced with the necessity of advancing their production, marketing and research projections further and further into the future. Although statistics are the inescapable facts which serve as guide posts, we must, to utilize adequately this historical information in planning for the future, fully utilize the "person communication" between the processor and supplier and the others with whom we do business.

As the industry's development and technology expand, so does the need for good communications within the industry. Those who have their fingers on the pulse of industry have found no substitute for the attendance by firm representatives at industry meetings and conventions to fill the basic person to person communication requirement.

Industry meetings, in addition to furnishing a platform for the study of industry problems, offer programs which are usually beyond the scope of individual companies. Specialists in the many fields of research, marketing, production, legislation, transportation and automation are attracted by group meetings at which they can share their experiences and know-how with those within the industry. A good example of the educational benefits thus afforded by a large group of firms and persons of one interest is the annual exhibit of the Canning Machinery and Supplies Association at the National Canners Convention. Equipment application information developed in the production centers throughout the United States is readily available from the manufacturers' technical representatives. Here in one area the firms furnishing machinery, supplies, and service demonstrate the most recent technological developments.

The officers, directors, committeemen, and the secretaries of the state and national associations, are to be complimented for their part in establising and maintaining good person to person communications within the industry. We, of the Canning Machinery and Supplies Association, look forward to meeting with our friends at the state and regional canner and freezer conventions in addition to the National Canners Convention, and pledge our continued effort in maintaining and furthering a truly great industry.

Mr. Vaughn is president of the Canning Machinery and Supplies Assn. and is Assistant General Manager, New Products Div., American Can Co.

Gold Medal Award Winners

The system, rather than the machine is getting the attention of manufacturers. The winners of the 1961 Gold Medal Awards show a prominent trend in this direction. The recent refinements of production machinery, requires more control than is often posisble in a single unit. Thus the sytem is the next development.

In selecting the winners from among the nominations (which were invited from all manufacturers of equipment and supplies) the Gold Medal Awards jury were interested in:

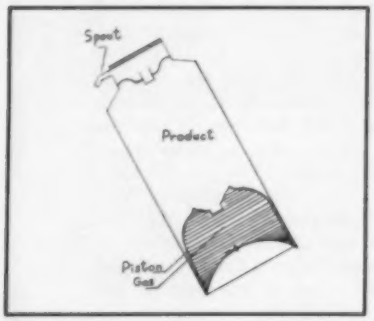
1. Things that were new and different—whether the uniqueness was a new item or an improvement of a conventional item.
2. Significant developments for the food industry—something really important.
3. Original research or research in neglected areas.

The selection of the Gold Medal Awards jury reflects the trend of the food industry to new techniques in processing, handling and packaging. For example, the development of freeze-drying as a developing technique is recognized by several awards.

Awards were given to 41 firms in 1961, 32 in 1960, and 50 in 1959.

Can Handling System. A coordinated system of receiving tin cans in bulk and getting them into production lines. The system involves bulk pallets, an accumulating "air chain" conveyor, and a depalletizer.

Alvey Conveyor, 9301 Olive St. Rd., St. Louis 32, Mo.
Circle No. 1 on Inquiry Card—p. 73.



Piston Barrier in Aerosol Can. A piston between the feed and the propellant provides smooth flow and nearly complete ejection. The container can be held at any angle.

American Can Co., Bradley-Sun Div., 100 Park Ave., New York 17, N. Y.
Circle No. 2 on Inquiry Card—p. 73.

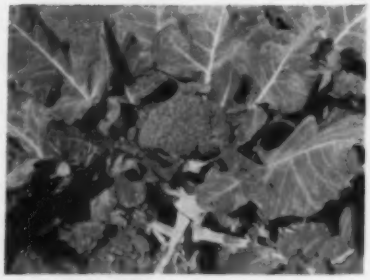
Microcrystalline Cellulose. A new food product disperses water. It adds density but does not change texture; it can add bulk to a food, but not calories. A highly purified form of cellulose, Avicel can add bulk to a whipped product or absorb fats to make peanut butter free-flowing.

American Viscose Corp., 1617 Pennsylvania Blvd., Philadelphia, Pa.
Circle No. 3 on Inquiry Card—p. 73.

Shorter, Lighter Pickle Jar. A new Centennial Pickle Jar takes up less space than a standard jar, (above left) but has the same capacity. The quart size is 1½ lbs. per case lighter than the regular jar.

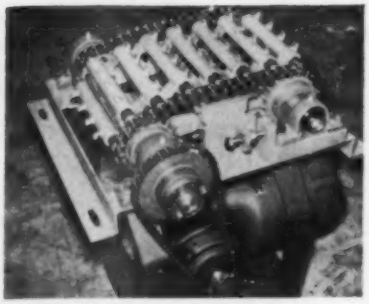
Armstrong Cork Co., West Liberty St., Lancaster, Pa.
Circle No. 4 on Inquiry Card—p. 73

Broccoli Varieties. Atlantic, a broccoli variety for the Eastern seaboard and Coastal (above), a variety for California, produce small plants for high



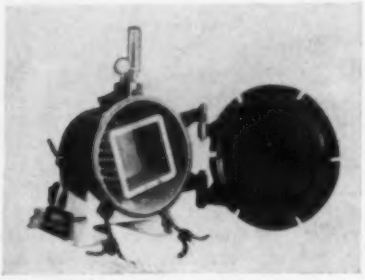
plant populations. Both have short growing periods.

Asgrow Seed Co., 272 George St., New Haven 10, Conn.
Circle No. 5 on Inquiry Card—p. 73



Conveyor Drive. A traction drive for flat wire belts, eliminates the need for transfers and belt returns. It can be used as a booster for belts operating over terminal sprockets or pulleys.

Ashworth Bros., Inc., P. O. Box 278, Winchester, Va.
Circle No. 6 on Inquiry Card—p. 73



Laboratory Retort. A self-contained agitating sterilizer for experimental or development studies has 3-1 variable speed motor, thermometer, safety valve, and pressure gauge.

Berlin Chapman Co., Berlin, Wis.
Circle No. 7 on Inquiry Card—p. 73

Piston Filler with Traveling Spouts. Twin piston filler designed to meter and place semi-solid or viscous materials onto moving trays, will operate up to 50 or more trays per minute. The Simplex Model TS services two trays in one cycle of the pistons.

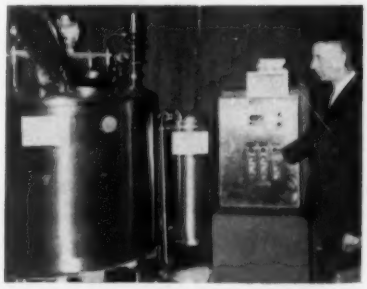
F. L. Burt Co., 1144 Howard St., San Francisco 3, Calif.
Circle No. 8 on Inquiry Card—p. 73

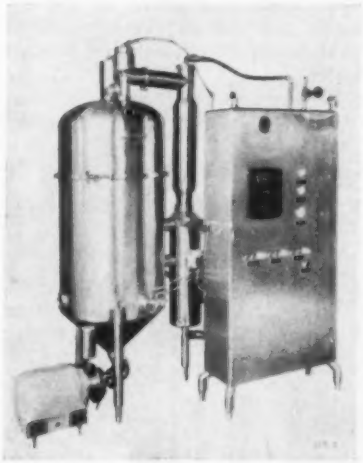
Tab-Opening Aluminum Can. A deep drawn aluminum can is provided with a lid that is counter-sunk to fit the container and close securely. The lid has a pull tab for easy opening.

Central States Can Corp., Massillon, Ohio.
Circle No. 9 on Inquiry Card—p. 73

Automatic Liquid Handling. A panel board controls liquids by weight. Control is by weight-sensing units in the legs of the tanks. System loads, unloads, recycles, agitates, etc. Trade name is Load-A-Matic system.

Cherry-Burrell Corp., 2400 St., S.W., Cedar Rapids, Ia.
Circle No. 10 on Inquiry Card—p. 73





Vacuum Treatment System. This system is used to deaerate, deodorize, or vacuum-cool liquid products. Controlled liquid flow into vacuum is distributed into a thin film. Jacketed tank of Roswell System may raise temperature 8-10° to assist in vacuum removal of noncondensable gases.

Chicago Stainless Equipment Corp., 5001 Elston Ave., Chicago 30, Ill.
Circle No. 11 on Inquiry Card—p. 73

Floating Suspension Magnet. A roller-type magnet counterbalanced over product conveying belt is self-adjusting for height above belt. This prevents damage to fragile items.

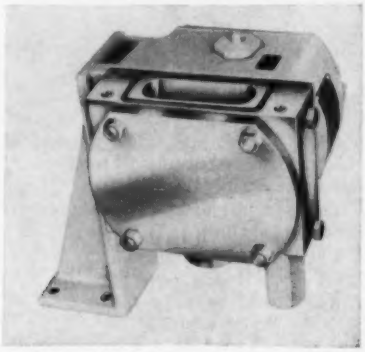
Columbia Engineering Service Co., 4025 Sebastopol Hwy., Santa Rosa, Calif.
Circle No. 12 on Inquiry Card—p. 73

Pattern Waxing of Frozen Food Cartons. A process called Adapta-Pak applies wax to all but the mating surfaces of cartons, which permits gluing a carton tightly but inexpensively. Speeds up to 300 per minute are obtainable.

Container Corp. of America, 38 S. Dearborn St., Chicago, Ill.
Circle No. 13 on Inquiry Card—p. 73

Diotite Cartoning System. A system for setting up and sealing frozen food cartons needs no overwraps. A preapplied adhesive heat seals automatically at speeds up to 200 cartons per minute.

Continental Can Co., Folding Carton Div., 530 Fifth Ave., New York 36, N. Y.
Circle No. 14 on Inquiry Card—p. 73



Pump and Hopper Unit. A system for positive pumping of viscous liquids

***Want More Information? Circle the number of the item on the Inquiry Card. Page 73-74.**

which contain solids (potato salad, hamburger relish, cheese) involves a hopper and a stainless rotary pump with a rectangular inlet. Pump 'N Feeder units are available in several sizes and pump capacities.

Creamery Package Mfg. Company, 1243 West Washington Blvd., Chicago 7, Ill.
Circle No. 15 on Inquiry Card—p. 73

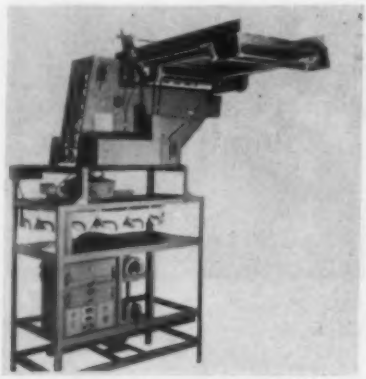
Opaque Poly Pack. An opaque film package for IQF frozen fruits and vegetables which require protection from ultra-violet light, provides surface for brand identification and full color vignettes.

Western - Waxide Division, Crown Zellerbach Corp., 2101 Williams St., San Leandro, Calif.
Circle No. 16 on Inquiry Card—p. 73

Foil Container with Film Cover. A Cryovac shrink film cover provides protection, visibility for frozen foods, vending and institutional feeding. A square sheet of film can be draped loosely over the product and automatically shrunk into a tight cover.

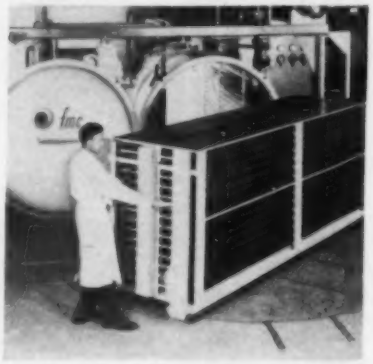
Ekco-Alcoa Containers Inc., Wheeling & Hintz Roads, Wheeling, Ill.
Circle No. 17 on Inquiry Card—p. 73

Automatic Color Sorter for Tomatoes. A color-sensing machine sorts tomatoes into red, green, dark green and



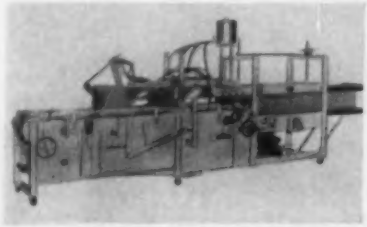
pink categories at speeds of 450 tomatoes per minute. Trade name is ESM Model G. Photoelectric Tomato Sorter.

Electric Sorting Machine Co., Div. of Mandrel Industries, Inc., Houston, Tex.
Circle No. 18 on Inquiry Card—p. 73



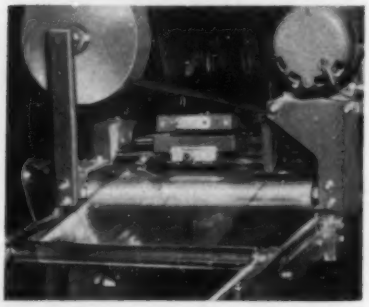
Freeze-Drying Equipment. A system consisting of cylindrical vacuum chambers with internal condensing plates positioned for line-of-sight vapor travel and mobile platen cars for product transport and holding. Heating solution is circulated through hollow shelving of cars.

FMC Corporation, Canning Machinery Div., 333 West Julian St., San Jose 8, Calif.
Circle No. 19 on Inquiry Card—p. 73



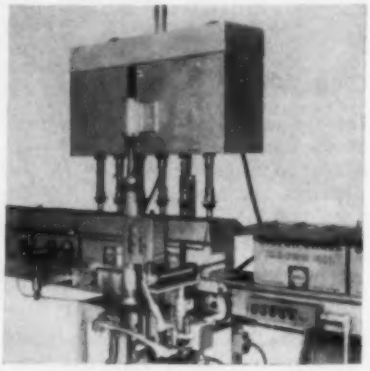
Short Case Sealer. Cases are automatically glued and sealed without an operator present. Patented glue valve applicators eliminate daily clean up, and provide savings up to 80% on glue. Short-A-Matic Case Sealer is 15 ft. long.

National Equipment Corp., 153-157 Crosby St., New York 12, N. Y.
Circle No. 20 on Inquiry Card—p. 73



Dry Process Printer. The Wrapaprint attachment uses inexpensive roll leaf instead of inks. It provides sharp, heat resistant and rub proof imprints on hard-to-print packaging materials. It prints on wax paper, polyethylene, cellophane, coated foil, etc., at high speeds.

Adolph Gottscho, Inc., 6 Evans Terminal, Hillside 5, N. J.
Circle No. 21 on Inquiry Card—p. 73



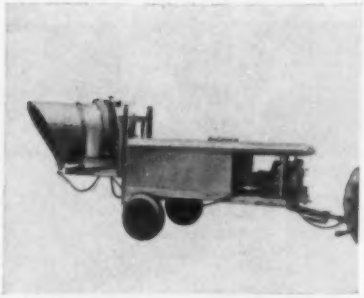
Can-in-Case Filler. Model LG-6-61 fully automatic filler fills 2-gallon "F"-tye cans without requiring can removal from shipping carton. Application is for moderate speed filling of

***Want More Information? Circle the number of the item on the Inquiry Card. Page 73-74.**

large containers in edible oil industries.

Horix Manufacturing Company, 1384 Island Ave. (McKees Rocks), Pittsburgh, Pa.

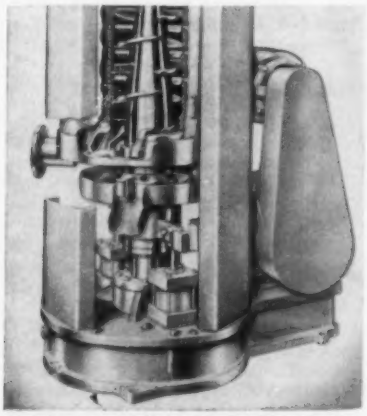
Circle No. 22 on Inquiry Card—p. 73



Air Spray Conversion Unit. Model 20-RC Aircrop is designed for converting high pressure sprayers of 15 gpm or more into air-type units. Controls for spray material valve, engine throttle, 210° rotation of the unit, and air deflector are operated by electric-hydraulic system.

John Bean Div., FMC Corporation, Lansing 9, Mich.

Circle No. 23 on Inquiry Card—p. 73



Continuous Juice and Dewatering Press. The Pressmaster Series of continuous presses are automatic, need no operator. They extract juice from fruits, berries, tomatoes and other vegetables. They dewater grains, coffee grounds, waste, etc.

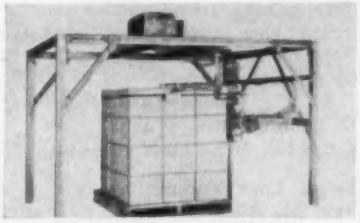
E. D. Jones Corp., Pittsfield, Mass.

Circle No. 24 on Inquiry Card—p. 73

French Fry Grader. A vibrating conveyor with three decks, size grades french fries by carrying them over punch plate sections and separating them according to length.

Key Equipment Co., Inc., Milton-Freewater, Ore.

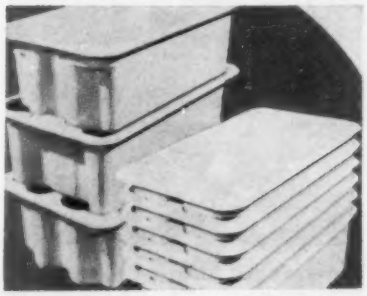
Circle No. 25 on Inquiry Card—p. 73



Automatic Taper. A fully automatic device for applying a strip of pressure sensitive tape around a group of cartons or containers to form a unit or sub-unit assembly.

Lathrop Paulsen Co., 2459 W. 48th St., Chicago 32, Ill.

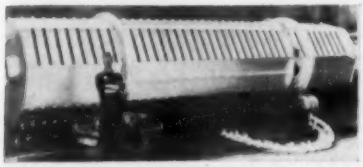
Circle No. 26 on Inquiry Card—p. 73



Plastic Food Pans. PolyLewton pans are molded from high-strength plastic. They are seamless with glass-like closed surface and easily cleaned. Stacked with similar ends together they nest, reversed they tier up.

G. B. Lewis Company, 616 Montgomery St., Watertown, Wis.

Circle No. 27 on Inquiry Card—p. 73



Roto-Fin Cooler. A drum cooler with fins that spiral around the inside of the shell. Drum revolves partly submerged in water, scooping up cool water with each revolution. Used in beet sugar plants for cooling granulated sugar from 130° to 90°F.

Link-Belt Company, Prudential Plaza, Chicago 1, Ill.

Circle No. 28 on Inquiry Card—p. 73

Information on Equipment and Supplies

A list of catalogues, bulletins, brochures from manufacturers, available free of charge to readers begin on page 94.

Split-Pak. A case designed for dividing into two self-contained units by cutting the top and bottom flaps. The container has a double bulkhead which can be accommodated in conventional filling and sealing equipment.

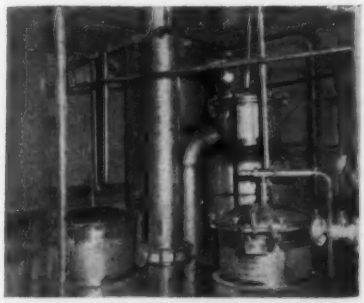
Longview Fibre Company, 111 Sutter St., San Francisco 4, Calif.

Circle No. 29 on Inquiry Card—p. 73

Time-Temperature Indicator. An electro-chemical indicator the size of a cigarette which can be placed in a frozen food case. Freezing temperatures start action of indicator which records accumulated heat as a red line that irreversibly creeps along the length of the unit.

Minneapolis - Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis 4, Minn.

Circle No. 30 on Inquiry Card—p. 73



Evaporator - Essence Recovery Unit. The system uses only 50% of steam and cooling water needed by conventional systems. Concentrates raw grape juice (in Kraft Foods plant above) 2000 GPH to 46% Brix, recovers, cools 100-fold essence down to 35°.

Mojonnier Bros. Co., 46-1 W. Ohio St., Chicago 44, Ill.

Circle No. 31 on Inquiry Card—p. 73

Awards

Hot-Melt Adhesive System. A system consisting of a granular adhesive, which needs no solvents, a melting hopper, an extrusion device and specially designed nozzles. The system is called Instant Lok. Carton sealers employing this system need no compression unit, nor require daily cleanup.

National Starch & Chemical Corp., 750 Third Ave., New York, N. Y.
Circle No. 32 on Inquiry Card—p. 73

Snap Bean for Processing. Abunda, a green-podded snap bean has a high and concentrated pod set. Bean is a white seeded, very productive plant which grows 18 to 21 inches tall.

Northrup, King & Co., 1500 Jackson St., NE, Minneapolis, Minn.
Circle No. 33 on Inquiry Card—p. 73

Water Treatment for Canning Plants. Oakite R. B. a new water treatment material for retorts and cooling canals drains off surfaces quickly, speeds dry-down, eliminates water spotting, improves label adhesion.

Oakite Products, Inc., 44F Rector St., New York 6, N. Y.
Circle No. 34 on Inquiry Card—p. 73

Void Case Ejector. A device which inspects cases of canned or bottled products (when closed with ferrous metal caps) either before or after case is sealed, and rejects cases that have missing containers or broken bottles.

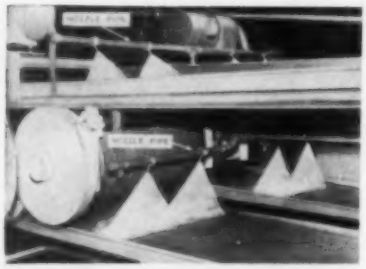
PECO Corp., 111 Ortega Ave., Mountain View, Calif.
Circle No. 35 on Inquiry Card—p. 73

Foil-Fibre Can. The Foil-Kan, made from laminated aluminum foil and fibre, spirally wound, can be used for frozen juice concentrates and save 20% on container costs and 5-10% on shipping charges.

R-C Can Company 9430 Page Ave., St. Louis 32, Mo.
Circle No. 36 on Inquiry Card—p. 73

Sweet Corn Variety. Staygold is a new, late yellow sweet corn variety for processing. It is resistant to Helminthosporium Leaf Blight, matures in 90 days. It is especially suitable where Blight and late summer drought are apt to be a problem.

Seed Research Specialists, Inc., P.O. Box 3091, Modesto, Calif.
Circle No. 37 on Inquiry Card—p. 73

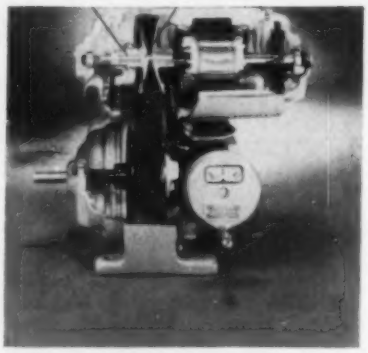


Conveyor Belt Cleaning System. System operates on plant steam and cold water. Multiple high pressure nozzles are permanently positioned over and under the conveyor. A 4,000 gph jet unit combines steam, water and detergents.

Sellers Injector Corp., 1600 Hamilton St., Philadelphia 30, Pa.
Circle No. 38 on Inquiry Card—p. 73

Vertical Conveyor. The Escaveyor, a continuous, high speed vertical lift, self-loads, self-unloads and lifts up to 10 loads per minute. It requires little floor space.

Standard Conveyor Co., North St., St. Paul 9, Minn.
Circle No. 39 on Inquiry Card—p. 73



Lube-Free Variable Speed Drive. Drives from ¼ to 25 hp with output speeds from 4660 rpm to .4 rpm and speed variations up to 10:1 are factory-lubricated and require no lubrication.

Sterling Electric Motors, Inc., 5401 Telegraph Road, Los Angeles 22, Calif.
Circle No. 40 on Inquiry Card—p. 73

Laboratory-Pilot Model Freeze-Dryer. A self-contained system needs only to be plugged in to freeze-dry foods. Three models have water removal capacities of 60 lbs., 105 lbs. and 170 lbs.

Vacudyne Corp., 14419 S. Torrence Ave., Chicago 3, Ill.
Circle No. 41 on Inquiry Card—p. 73

***Want More Information? Circle the number of the item on the Inquiry Card. Page 73-74.**

Equipment/Supplies Index

Alphabetical List of Suppliers

ABC Packaging Machine Corp., Box 1285, Tarpon Springs, Fla.

APV Co., Inc., 137 Arthur St., Buffalo 7, N. Y.

Abbott Laboratories, 14th and Sheridan, North Chicago, Ill.

Ace Specialty Mfg. Co., 9616 East Valley Blvd., Rosemead, Calif.

Acme Steel Co., 135th & Perry Ave., Chicago 27, Ill.

Adair, Robin W. Company, Inc., Avoca, N. Y.

Adhesive Products, Inc., Clearland Ave., Albany 10, Calif.

Advertising Checking Bureau, 18 So. Michigan Ave., Chicago 3, Ill.

Agtron Co., P. O. Box 888, Monterey, Calif.

Airkem, Inc., 241 East 44th St., New York 17, N. Y.

Ajusto Equipment Co., 515 Conneaut St., Bowling Green, Ohio.

• Albertoli, John, 418 Beach St., San Francisco, Calif.

Albright Co., Thomas, 814 E. Jefferson, Goshen, Ind.

Algene Marking Equipment Co., 232 Palisade Ave., Garfield, N. J.

Allen Cartons, Inc., Dayton 1, Ohio

Allen Fruit Co. Inc., Machinery Div., P. O. Box 352, Newberg, Ore.

Allen Machinery and Equipment Co., 600 16th St., Oakland 12, Calif.

Allied Chemical Corp., 40 Rector St., New York, N. Y.

Allis Chalmers Mfg. Co., Tractor Group, 1125 S. 70th, Milwaukee, Wis.

• Alloy Wire Belt Co., 210 Phelan Ave., San Jose 12, Calif.

Alsop Engineering Corp., 104 Madison St., Milldale, Conn.

Aluminum Co. of America, 1501 Alcoa Bld., Pittsburgh 19, Pa.

Alvey Conveyor Mfg. Co., 9307 Olive St. Rd., St. Louis 32, Mo.

Amalgamated Sugar Co., First Security Bldg., Ogden, Utah

American Box Corp., 2740 Hyde St., San Francisco 19, Calif.

• American Can Co., Canco Div., 100 Park Ave., New York 17, N. Y.

American Cyanamid Co., Agr. Chems., Div., RCA Bldg., 30 Rockefeller Plaza, New York 20, N. Y.

American Express Field Warehousing Corp., 65 Broadway, New York 6, N. Y.

American Machinery Corp., Box 3228, Orlando, Fla.

American Maize Products Co., 250 Park Ave., New York 17, N. Y.

• American Molasses Co., 120 Wall St., New York 5, N. Y.

American Optical Co., Instrument Div., Eggert Road, Buffalo 15, N. Y.

American-Standard Industrial Div., 8111 Tireman Ave., Detroit 32, Mich.

• American Steel and Wire Div., U.S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio

American Sterilizer Co., 2400 W. 23rd St., Erie, Pa.

American Sugar Refining Co., 120 Wall St., New York, N. Y.

American Viscose Corp., 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

American Wheaton Glass Corp., Div. of Amer. Can Co., Millville, N. J.

Amerio Contact Plate Freezers, Inc., 280 Gorge Road, Cliffside Park, N. J.

• Ams Machine Co., Max, Scofield Ave., Bridgeport, Conn.

Anaconda Aluminum, Container Div., Louisville, Ky.

• Anchor Hocking Glass Corp., Package Div., 40 Glass Ave., Lancaster, Ohio

• Anderson Bros. Manufacturing Co., 1907 Kishwaukee St, Rockford, Ill.

• Angelus Sanitary Can Machine Co., 4900 Pacific Blvd., Los Angeles 58, Calif.

Anheuser-Busch, Inc., 721 Pestalozzi St., St. Louis, Mo.

Arabol Mfg. Co., 110 E. 42nd St., New York 17, N. Y.

Archer-Daniels-Midland Co., 700 Investors Building, Minneapolis 2, Minn.

Archibald & Kendall, Inc., 481 Washington St., New York 13, N. Y.

Armour Alliance Industries, 16123 Armour St., N.E., Alliance, Ohio

Armstrong Cork Co., Liberty and Mary Sts., Lancaster, Pa.

• Aseptic-Thermo Indicator Co., 11471 Vanowen St., N. Hollywood, Calif.

• Asgrow Seed Company, 272 George St., New Haven 10, Conn.

• Ashlock Co., Geo. W., 855 W. Ave. 135, San Leandro, Calif.

• Ashworth Bros. Inc., P. O. Box 278, Winchester, Va.

Associated Bag & Apron Co., 901 W. Huron St., Chicago 22, Ill.

• Atkron, Inc., P. O. Box 311, Cuyahoga Falls, Ohio

Atlas Chem Industries, New Murphy & Concord Pike, Wilmington, Del.

Atlas-Pacific Engineering Co., 67th and Hollis Sts., Emeryville, Calif.

Atwood Adhesives, Inc., 1000 Eighth Ave., So., Seattle 99, Wash.

Audubon Metalwove Belt Div., Richmond & Castor, Philadelphia 34, Pa.

B

B-I-F Industries, Inc., 375 Harris Ave., Providence, R. I.

• Baker Chemical Co., J. T., Phillipsburg, N. J.

Baker Industrial Trucks Div., Otis Elevator Co., 8000 Baker Ave. N.W., Cleveland 2, Ohio

Baldwin Lima Hamilton Corp., Industrial Equipment Div., Philadelphia 42, Pa.

Ball Brothers Co., Muncie, Ind.

Ball, Inc., George J., West Chicago, Ill.

Baltimore Spice Co., Baltimore 8, Md.

Barker Co., 5812-22nd St., Tampa 4, Fla.

Barkley & Dexter Labs, Inc., South Frankfort St., Fitchburg, Mass.

Barnstead, Still and Sterilizer Co., 2 Lanesville Terrace, Forest Hills 38, Mass.

Barrett-Cravens Co., 630 Dundee Road, Northbrook, Ill.

Barry-Wehmiller Machinery Co., 4660 W. Florissant Ave., St. Louis 15, Mo.

Bartelt Engineering Co., Inc., 1900 Harrison Ave., Rockford, Ill.

Basic Food Materials, Inc., P.O. Box 168, Vermillion, Ohio

Basic Vegetable Products, 120 Montgomery St., San Francisco 4, Calif.

Battle Creek Packaging Machines, Inc., 12th St. & Ave. C, Battle Creek, Mich.

Baur Bros. Co., Springfield, Ohio

Bausch and Lomb, Inc., 60561 Bausch St., Rochester 2, N. Y.

Beatrice Foods Co., 1526 S. State St., Chicago 5, Ill.

Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.

Bell-Mark Corp., 18 Ropes Place, Newark 7, N. J.

Belt-Ice Corp., 3400 16th Ave .W., Seattle 99, Wash.

Bemis Bro. Bag Co., 111 N. Fourth St., Box 75, St. Louis 2, Mo.

• Benner-Nawman, Inc., 3421 Hollis St., Oakland, Calif.

• Berlin Chapman Co., Berlin, Wis.

Bernardin Bottle Cap Co., 2201 W. Maryland St., Evansville 12, Ind.

Bethlehem Steel Co., Bethlehem, Pa.

• Biner-Ellison Machinery Co., 1101 N. Main St., Los Angeles 54, Calif.

Blackman Labs., Inc., Stanley, Wesley Street, S. Hackensack, N. J.

Bliss Co., E. W., 1375 Raff Rd., S. W., Canton, Ohio

Boise Cascade Container Corp., a Div. of Boise Cascade Corp., Wallula, Wash.

Borden Co., 350 Madison Ave., New York 17, N. Y.

Bostitch, Inc., 2007 Briggs Drive, East Greenwich, R. I.

Bowen Engineering Co., North Branch 3, N. J.

Brabender Instruments Inc., C. W., 50 E. Westley St., S., Hackensack, N. J.

Bradley-Sun, Div. of American Can Co., U.S. Highway 22, Union, N. J.

Brady Co., W. H., 737 W. Glendale Ave., Milwaukee, Wis.

Brewers & Bottlers Equipment Corp., 104 Asylum St., Hartford 3, Conn.

Bridge Machine Co., Palmyra, N. J.

Brilmayer Labs, E. W., 86 Fulton St., New York 38, N. Y.

Bristol Co., P.O. Box 1790 CP, Platts Mills, Waterbury 20, Conn.

• Brockway Glass Co., Inc., Brockway, Pa.

Brookfield Engineering Lab., Inc., 240 Cushing, Stoughton, Mass.

Brook Motor Corp., 3302 W. Peterson Ave., Chicago 45, Ill.

Brooks Chemicals, Inc., 3304 E. 87th St., Cleveland 27, Ohio

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Equipment/Supplies Index

Brown Co., Clarence, Box 1373, Modesto, Calif.

Brown Filling Machine Co., Inc., Subsidiary of Sunstrand Corp., Ann Arbor, Mich.

Buffalo Meter Company, Inc., 2910 Main St., Buffalo 16, N. Y.

Buffalo Turbine Agricultural Equipment Co., 68 Industrial St., Gowanda, N. Y.

Buffalo Weaving and Belting Co., 260 Chandler St., Buffalo, N. Y.

Buflovak Equipment Div., Blaw-Knox Co., 1637 Fillmore Ave., Buffalo 11, N. Y.

Burpee Co., W. Atlee, Huntington Pk. Ave. & 18th St., Philadelphia 32, Pa.

Burrell Belting Co., 7501 St. Louis St., Skokie, Ill.

Burrell Seed Growers Co., D. V., P.O. Box 150, Rocky Ford, Colo.

Burt Co., F. L., 1144 Howard St., San Francisco, Calif.

• Burt Machine Co., 401 East Oliver St., Baltimore 2, Md.

Buschman Co., E.W., 4146 Clifton Ave., Cincinnati, Ohio

Busse Bros., 269 Grove St., Randolph, Wis.

Butler Manufacturing Co., 7479 E. 13th St.. Kansas City 26, Mo.

Bzura Chemical Co., Clark St., Keyport, N. J.

C

Caldwell Co., W.E., 2158 Brook St., Louisville, Ky.

• California Food Industry Insurance Co., 3630 Wilshire Blvd., Los Angeles 5, Calif.

California & Hawaiian Sugar Refining Corp., 215 Market St., San Francisco 5, Calif.

California Pine Box Distributors, 681 Market St., San Francisco 5, Calif.

California Chemical Co., Ortho Div., Lucas and Ortho Way, Richmond, Calif.

• California Vegetable Concentrates, P.O. Box 149, Huntington Park, Calif.

• Callahan Can Machine Co., Div. of Vt. Marble Co., Proctor, Vt.

Calvert Lithographing Co., 2100 Grand River Ave., W., Detroit 1, Mich.

• Cambridge Wire Cloth Co., Cambridge, Md.

• Canners Exchange, managed by Lansing B. Warner Inc., 4210 Peterson Ave., Chicago 30, Ill.

Canners Supply, P.O. Box 1665, Modesto, Calif.

Carlisle and Co., A., 645 Harrison St., San Francisco, Calif.

Carnation Co., Can Div., 5045 Wilshire Blvd., Los Angeles, Calif.

Carrier Corp., Syracuse 1, N. Y.

Carver Inc., Fred S., 1 Chatham Road, Summit, N.J.

Cascade Container Corp., P.O. Box 300, Walla Walla, Wash.

Castle, Inc., A. L., P.O. Box 275, Morgan Hill, Calif.

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

Central Can Company, 3200 S. Kilbourn Ave., Chicago, Ill.

Central States Can Corp., 1801 Harsh St., SE, Massillon, Ohio

Central States Paper & Bag Co., 5221 Natural Bridge 15, St. Louis, Mo.

Central Steel and Tank Co., Box 13, 1106 N. 16th Ave., Yakima, Wash.

Centrico, Inc., 75 W. Forest Ave., Englewood, N. J.

Chain Belt Co., 4701 West Greenfield, Milwaukee 1, Wis.

Champion Bronze Powder & Paint Co., Inc., 2101-21 N. Elston Ave., Chicago 14, Ill.

Champion Corp., 4714 Sheffield Ave., Hammond, Ind.

Champion Paper and Fibre Co., Hamilton, Ohio.

Champion-Pneumatic Machy. Co., 825 N. Pleasant St., Princeton, Ill.

Chapman Chemical Co., Wood Preservative Div., 60 N. Third St., Memphis, Tenn.

Charter Seed Co., 1124 Merican St., San Jose, Calif.

Chem-Guard Products, Inc., 1015 Commercial St., San Carlos, Calif.

Chemicolloid Laboratories, 55 Herrick Road, Garden City Park, New York

• Cherry-Burrell Corp., 2400 Sixth St. S. W., Cedar Rapids, Iowa

Chevrolet Motor Div., General Motors Corp., General Motors Bldg., Detroit 2, Mich.

Chicago Apparatus Co., 1735 N. Ashland Ave., Chicago, Illinois

Chicago Metallic Mfg. Co., Lake Zurich, Ill.

Chicago Stainless Equipment Corp., 5001 Elston Ave., Chicago, Ill.

Chicago Transparent Bag Co., 4808 West Chicago Ave., Chicago 51, Ill.

Chisholm-Ryder Co., Inc., Niagara Falls, N. Y.

Chisholm-Ryder Co. of Penna., Blettner Ave., Hanover, Pa.

Christian Engineers, J. D., 480 Potrero Ave., San Francisco 10, Calif.

Circo Equipment Co., 51 Terminal Ave., Clark, N.J.

Citrus Equipment Corp., 673 W. Putnam Drive, Whittier, Calif.

City Products Corp., 335 Clark St., Chicago 3, Ill.

Clark Door Co., 515 Hunterdon St., Newark 8, N. J.

Clark Equipment Co., Industrial Truck Div., Battle Creek Mich.

Clayton Mfg. Co., 406 N. Temple City Blvd., El Monte, Calif.

Cleveland Vibrator Co., 2828 Clinton Ave., Cleveland 13, Ohio.

Clinton Corn Processing Co., Clinton, Ia.

Clipper Belt Lacer Co., 974 Front Ave., Grand Rapids 2, Mich.

Cochrane Div., Crane Co., 3259 N. 17th St., Philadelphia 32, Pa.

Cog Corp., 4389 W. Lake St., Chicago 24, Ill.

Collier Carbon & Chem. Corp., 714 W. Olympic Blvd., Los Angeles 15, Calif.

Colorado Fuel and Iron Corp., Continental Oil Bldg., Denver 2, Colo.

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Columbia Engineering Sc. Co., Box 480, Sebastopol, Calif.

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• Consolidated Freightways, Inc., 9 First St., San Francisco, Calif.

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Consolidated Syphone Supply Co., 22 Wooster St., New York City, N.Y.

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Container Stapling Corp., 27th St., P.O.C. R.R., Herrin, Ill.

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• Continental Can Co., 100 E. 42nd St., New York 17, N. Y.

Continental Freezers of Ill., Inc., 4220 S. Kildare, Chicago, Ill.

• Corn Products Co., Industrial Div., 10 E. 56th St., New York 22, N. Y.

Corneli Seed Co., 101 Choutrau Ave., St. Louis, Mo.

Cornell Paperboard Products Co., Div. of St. Regis Paper Co., 1514 E. Thomas Ave., Milwaukee, Wis.

Corning Glass Works, 1946 Crystal St., Corning, N. Y.

Corrigan Co. Inc., J.C., 41 Norwood, Boston 22, Mass.

Crane Co., 4100 S. Kedzie Ave., Chicago, Ill.

• Creamery Package Mfg. Co., 1243 W. Washington Blvd., Chicago 7, Ill.

Crest Foods Co., Ashton, Ill.

Crocker Co., H. S., 1000 San Mates Ave., San Bruno, Calif.

Crompton & Knowles Packaging Corp., Redington Div., Bellwood, Ill.

Crompton & Knowles Packaging Corp., Wrap-King Div., Agowam, Mass.

• Cromwell Paper Co., 180 N. Wabash Ave., Chicago 1, Ill.

Crown Cork & Seal Co., Inc., 9300 Ashton Road, Philadelphia 36, Pa.

Crown Zellerbach Corp., Western-Waxide Div., 2199 Williams St., San Leandro, Calif.

Currie Machinery Co., 1150 Walsh Ave., Santa Clara, Calif.

Curtis Automotive Devices, Inc., Dyna-Fog Products Div., P. O. Box 297, Westfield, Ind.

Cuyler Corp., Otto W., Webster, N. Y.

D

D and M Products, Inc., 26 N. Raymond Ave., Pasadena 1, Calif.

Dacam Corp., P.O. Box 680, Lynchburg, Va.

Darworth, Inc., Chemical Products Div., Simsbury, Conn.

Daystrom, Inc., Weston Instruments Div., 614 Freilinghuysen Ave., Newark 12, N. J.

Dazey Div., Landero, Frary and Clark, 711-5th Ave., New York, N. Y.

DeLaval Separator Co., Poughkeepsie, N. Y.

Dennison Mfg. Co., 300 Howard St., Framingham, Mass.

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Diamond Chain Co., Inc., 402 Kentucky Ave., Indianapolis, Ind.

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Equipment / Supplies Index

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Diamond Mfg. Co., 1763 Timothy Drive, San Leandro, Calif.
Diamond National Corp., The Gardner Div., 407 Charles St., Middletown, Ohio
Dings Magnetic Separator Co., 4740 W. Electric Ave., Milwaukee, Wis.
Diversey Corp., 212 W. Monroe, Chicago 6, Ill.
Dixie Wax Paper Co., 1300 South Polk St., Dallas 24, Texas
Dobeckmun Co. Div., Dow Chemical Co., P.O. Box 6417, Cleveland 1, Ohio
Dodge Mfg. Corp., Mishawaka, Ind.
Dodge and Olcott, Inc., 75-Ninth Ave., New York 11, N. Y.
Dole Engineering Co., James, Russ Building, San Francisco, Calif.
Dole Refrigerating Co., 5910 N. Pulaski Road, Chicago 30, Ill.
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Douglas-Guardian Warehouse Corp., 118 N. Front St., New Orleans, La.
• Dow Canvas Products Co., 2705 Calumet Ave., Manitowoc, Wis.
Dow Chemical Co., Midland, Mich.
Dow Corning Corp., Midland, Mich.
DuBois Chemicals, Inc., Broadway at 7th, Cincinnati 2, Ohio
Dudley Machinery Corp., 2750 Scott Lane, Santa Clara, Calif.
Dundon Iron Works, 2285 Jerrold Ave., San Francisco 24, Calif.
Dunham-Bush, Inc., West Hartford, Conn.
Dunkley Co., 1910 Lake St., Kalamazoo, Mich.
Du Pont de Nemours & Co., E. I., Wilmington 98, Del.
Durant Mfg. Co., 1954 N. Buffum St., Milwaukee 1, Wis.
Durkee Famous Foods, Div. of the Glidden Co., 900 Union Commerce Bldg., Cleveland 14, Ohio

E

Eagle Machinery Co., Ltd., 465 California St., San Francisco, Calif.
Easterday Paint & Chem. Co., Highway 32, North Racine, Wis.
Eastman Chem. Prod., Inc., 260 Madison Ave., New York 16, N. Y.
Economics Lab., Inc., Guardian Bldg., St. Paul, Minn.
Economic Machinery Co., Worcester, Mass.
• Edlund Co., 159 Home Ave., Burlington, Vt.
Edmont Inc., 1212 Walnut St., Coshocton, Ohio
Ekco-Alcoa Containers, Inc., Wheeling, Ill.
Electric Auto-Lite Co., Champlain and Mulberry, Toledo 1, Ohio
Electric Sorting Machine Co. Div., Mandrel, Ind., Inc., 5134 Glenmont, Houston 36, Texas
Electro Mechanisms Inc., 463 El Melio, Pacific Palisades, Calif.
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Elliott Mfg. Co., Inc., 1735 Ventura, Fresno 1, Calif.
• Emhart Mfg. Co., Portland Div., 127 Main St., Portland, Conn.
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Eureka Specialty Printing Co., 530 Electric, Scranton 9, Penn.
Evans Research & Development Corp., 250 E. 43rd Street, New York 17, N.Y.
Exact Weight Scale Co., 538 E. Town St., Columbus 15, Ohio
Eyrle Co., 1539 Folsom St., San Francisco 3, Calif.

F

• FMC Corporation, Canning Machinery Div., P. O. Box 1120, San Jose 8, Calif.
FMC Corporation, John Bean Div., 1305 South Cedar, Lansing 4, Mich.
FMC Corporation, Niagara Chems. Div., 100 Niagara St., Middleport, N. Y.
FMC Corporation, Peerless Pump Hydrodynamics Div., 301 W. Ave. 26, Los Angeles 31, Calif.
FMC Corporation, Stokes & Smith Plant, 4952 Summerdale Ave., Philadelphia 24, Pa.
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Fairbanks, Morse & Co., 100 Electra Lane, East Station, Yonkers, N. Y.
• Fairfield Chemicals, FMC Corporation, 441 Lexington Ave., New York 17, N. Y.
Fairmont Glass Corp., 1301 S. Keystone Ave., Indianapolis, Ind.
Falk Corp., Box 492, Milwaukee 1, Wis.
Famous Lubricants, Inc., 124 West 47th St., Chicago 9, Ill.
Farmhand Div., Superior Separator Co., Hopkins, Minn.
Farquhar Div., A. B., Conveyor Systems, Inc., 6451 Maine St., Morton Grove, Ill.
Fast-Flo Corp., 1707 Kings Highway, Brooklyn, N. Y.
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• Felton Chem. Co., Inc., 599 Johnson Avenue, Brooklyn 37, N. Y.
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• Fernholtz Machinery Co., 8468 Melrose Pl., Los Angeles 46, Calif.
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• Fibreboard Paper Products Corp., 475 Brannan St., San Francisco 4, Calif.
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Filper Corp., P.O. Box 28, San Ramon, Calif.
Findley Co., F. G., 3033 W. Pemberton, Milwaukee, Wis.
Finnell System, Inc., 500 East St., Dept. C/P, Elkhart, Ind.
Firmenich, Inc., 250 West 18th St., New York 11, N. Y.
First Machinery Corp., Falcon Mfg. Div., 209-289 Tenth St., Brooklyn 15, N. Y.
First Spice Mixing Co., Inc., 35-05 Green Point Ave., Long Island City 1, N. Y.
Fischer & Porter Co., 61 Warminster Road, Warminster, Pa.
Fitzpatrick Co., W. J., 1001 W. Washington St., Chicago 7, Ill.
Flintkote Co., 5500 S. Alameda, Los Angeles, Calif.
• Florasynth Laboratories, Inc., 900 Van Nest Ave., New York 62, N. Y.
Fluidizer Div., Daffin Corp., 121 Washington Ave. S., Hopkins, Minn.
Food and Drug Research Labs., Inc., Maurice Ave. at 58th St., Maspeth 78, N. Y.
Food Materials Corp., 2711 W. Irving Park Rd., Chicago 18, Ill.
Food Packers Equipment Co., 804 East 8th St., P. O. Box 390, New Albany, Ind.
Food Systems, Inc., 2705 - 10th St., Berkeley 10, Calif.
Foote Bros. Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
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Foster Forbes Glass Co., Marion, Ind.
Fostoria Corp., 1200 North Main St., Dept. D-10, Fostoria, Ohio
Fouche, Maison Frederic, Food Machinery Dept., 1 a 7, Route de Saint-Denis, La Courneuve (Seine), France
Foxboro Co., 38 Neponset Ave., Foxboro, Mass.
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Fritzsche Brothers, Inc., 76 Ninth Ave., New York 11, N. Y.
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Fulton Asphalt Co., 165 W. Wacker Dr., Chicago 1, Ill.

G

G and H Products Corp., 5718 52nd St., Kenosha, Wis.
Gallatin Valley Seed Co., Box 144, Twin Falls, Idaho.
Gamse Litho Co., Pulaski Hiway & 66th, Baltimore 6, Md.
Gardner-Denver Co., Quincy, Ill.
Gardner Mfg. Co., 60 C. Kansas St., Horicon, Wis.
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The Gates Rubber Co., 999 S. Broadway, Denver 17, Colo.
Gaylord Container Div., Crown Zellerbach Corp., 1 Bush St., San Francisco, Calif.
Geigy Agricultural Chemicals, Saw Mill River Rd., Ardsley, N. Y.
General Amer. Trans. Corp., Process Equip. Div., 135 S. LaSalle St., Chicago 3, Ill.
General Box Co., 1825 Milner Co., Des Plaines, Ill.
General Capsule Co., 42 Watson St., Detroit, Mich.
General Corrugated Machinery Co., 141 W. Central Blvd., Palisades Park, N. J.
General Electric Co., X-Ray Dept., 4855 Electric Ave., Milwaukee 1 ,Wis.
General Food Equipment Co., P.O. Box 1429, Lakeland, Fla.
General Nailing Machine Co., 1524 Smyrna Ave., Sanger, Calif.
General Packaging Equipment Co., P.O. Box 19525, Houston 24, Tex.
Genisco, Inc., 2233 Federal Ave., Los Angeles, Cal.
Gentry, a Div. of Consolidated Foods Corp., 1111 South Central Ave., Glendale 4, Calif.
• Getz Exterminators, Inc., 2234 Olive St., St. Louis, Mo.
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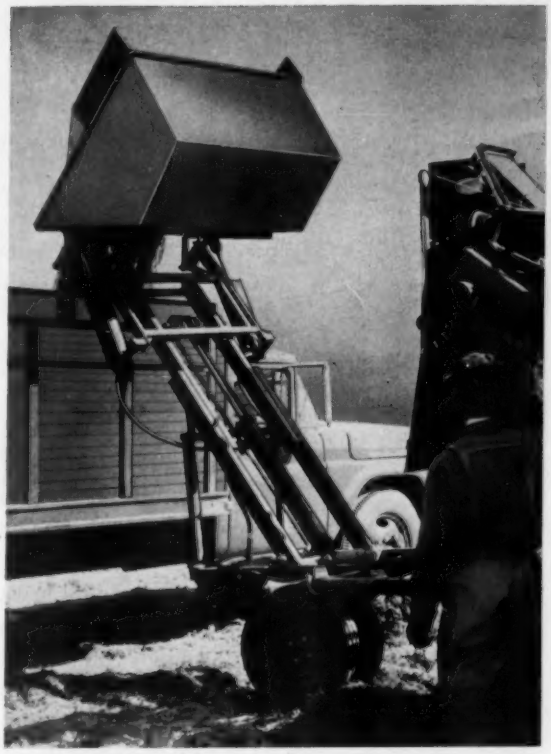

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It's true. USS Cyclone makes more kinds of metal conveyor belts than anyone else in the industry. Flexigrid, Flat wire or Woven wire, Cyclone will engineer it to fit your particular set of problems in your processing system. And then service it. We have 69 Cyclone Sales Offices across the country so you can get faster service from us than from anyone . . . no matter where you are. The next time you need a conveyor belt recommendation, call USS Cyclone. We're in the Yellow Pages under "Conveyor Belts—Metal."

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Goodyear Air Craft Corp., Akron 15, Ohio
Goodyear Tire and Rubber Co., 1144 E. Market St., Akron 16, Ohio
• Gottscho Inc., Adolph, 6 Evans Terminal, Hillside 5, N. J.
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Great Western Sugar Co., 1530 16th St., Denver, Colo.
Green Bay Foundry & Machine Works, 401 S. Broadwy, Green Bay, Wis.
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Griffith Laboratories, Inc., 1415 West 37th St., Chicago 9, Ill.
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Guardian Chemical Corp., 38-15 30th St., Long Island City 1, N. Y.
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H

• Hamachek Machine Co., Frank, Kewaunee, Wis.
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J

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Jones & Laughlin Steel Corp., 3 Gateway Center, Pittsburgh 30, Pa.

K

KVP Sutherland Paper Co., Kalamazoo, Mich.
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Kaiser Steel Corp., 1924 Broadway, Oakland 12, Calif.
The Kartridg Pak Co., 800 West Central Road, Mount Prospect, Ill.
Kelco Co., 75 Terminal Avenue, Clark, N. J.
Kennedy Car Liner and Bag Co., Inc., 3000 Prospect Ave., Shelbyville, Ind.
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Keystone Lubricating Co., 21st & Clearfield Sts., Philadelphia 32, Pa.
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Kiwi Coders Corp., 4027 N. Kedzie Ave., Chicago 18, Ill.
• Klenzade Products, Inc., 251 Wheeler, P.O. Box 1020, Beloit, Wis.
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Knickerbocker Mills, 601 W. 26th St., New York, N. Y.
Knox Glass Inc., Knox, Pa.
Koch Equipment Co., 1411 W. 29th St., Kansas City 8, Mo.
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Kordite Co., Macedon, N. Y.
Kramer Trenton Co., Olden Ave. & Breuig Ave., Trenton, N. J.
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Kromer Co., O. W., 1120 Emerson Ave., N., Minneapolis 11, Minn.

L

• L.E.E. Inc., 625 New York Avenue N.W., Washington 1, D. C.
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Lake State Yeast & Chemical Co., Div. of St. Regis Paper Co., Rhinelander, Wis.
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• Langsenkamp Co., Inc., F. H., 229 East South St., Indianapolis 25, Ind.
La Porte Mat & Mfg. Co., 305 Brighton St., La Porte, Ind.
• Latchford Glass Co., P. O. Box 71707, Los Angeles, Calif.
Lathan Mfg. Co., 2800 Ruso Bldg., San Francisco 4, Calif.
Lathrop Paulson Co., 2459 W. 48th St., Chicago 32, Ill.
Lawrence Warehouse Co., 37 Drumm St., San Francisco 11, Calif.
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Leeds and Northrup Co., 4907 Stenton Ave., Philadelphia 44, Pa.
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Lewis, G. B., Watertown, Wis.
• Lewis Refrigerator Co., 1610 Lake City St., Seattle 55, Wash.
Lewis-Sheppard Products, Inc., 125 Walnut, Watertown 72, Mass.
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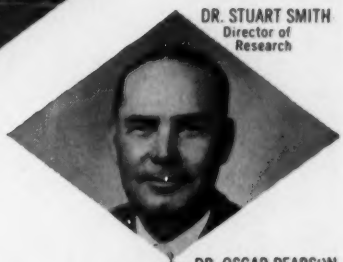

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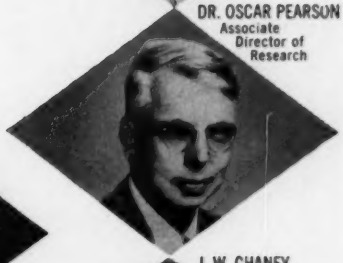

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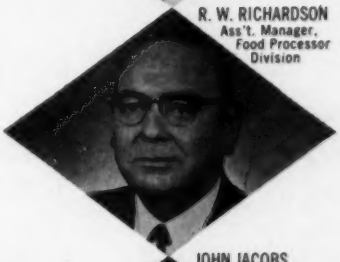

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• Wisconsin Alumni Research Foundation, P. O. Box 2217, Madison 1, Wis.
Wisconsin Cold Storage Co., 344 E. Florida St., Milwaukee, Wis.
• Wooden Box Institute, 55 New Montgomery St., San Francisco 5, Calif.
Woodman Co., Inc., 647 East College Ave., Decatur, Ga.
Woolson Spice Co., Summit and Sandusky Sts., Toledo, Ohio
Wyandotte Chemicals Corp., J. B. Ford Div., Wyandotte, Mich.

Y

Yale & Towne Mfg. Co., Automatic Transportation Div., 101 W. 87th St., Chicago 20, Ill.
Yeomans Bros. Co., 1999 N. Ruby St., Melrose Park, Ill.
York Div., Borg-Warner Corp., Grantley Rd., York, Pa.
Youngstown Sheet and Tube Co., Youngstown 1, Ohio

Z

• Zeiss, Inc., Carl, 485 Fifth Ave., New York 17, N. Y.

• *Advertisers in this issue—See p. 206.*

Classified Listing of Suppliers

How To Use It

1. The **name** of the manufacturer is given under the product listing.
2. The **address** of the manufacturer is given in the alphabetical listing, which begins on page 53.

Where to Look

Section A 65
Preparation and Processing Equipment
Section B 72
Food Ingredients and Additives
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Raw Product Equipment and Supplies
Section D 76
Maintenance, Lubrication, Sanitation Equipment and Supplies
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Handling, Conveying and Power Equipment
Section F 84
Packaging Equipment Containers and Supplies
Section G 90
Control and Laboratory Equipment, Instruments, Supplies.
Section H 92
Special Services
Section I 93
Contract packers of food in aerosol cans.

SECTION A
Preparation and Processing Equipment

Agitators, mixers, stirrers, blenders

Atlas-Pacific Engineering Co.
Bauer Bros. Co.
Benner-Nawman, Inc.
Brookfield Engineering Lab., Inc.
Chemicolloid Labs.
Cherry-Burrell Corp.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cog Corp.
Colton Co., Arthur
Creamery Package Mfg. Co.
Dunkley Co.
Fernholtz Machinery Co.
First Machinery Corp., Falcon Mfg. Div.
General American Transportation Corp., Process Equipment Div.
Girdler Process Equipment Div. Chemetron Corp.
Groen Mfg. Co.
Hanson Equipment Co.
Krenz Inc., Oscar
Lee Metal Products Co.
Metal-Glass Products Co.
Mixing Equipment Co.
Patterson-Kelly
Pfaudler Permutit, Inc.
Renneburg & Sons, Co., Edward
Sprout Waldron Co., Inc.
Stokes Corp., F. J.
Sturtevant Mill Co.
Rietz Mfg. Co.
Terriss-Consolidated Industries
Thermovac Inc.
Union Standard Equipment Co.
United Co., The

Blanchers, pre-heaters, steamers

American Machinery Corp.
Atlas-Pacific Engineering Co.
Baur Bros. Company, The
Benner-Nawman, Inc.
Berlin Chapman Co.
Central Steel and Tank Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cuyler Corp., Otto W.
Dunkley Co.
FMC Corporation
Fostoria Corp.
Huntley Mfg. Co.
Krenz Inc., Oscar
Metal-Glass Products Co.
Palmer Co., Harold L.
Pease Co., F. B.
Rietz Mfg. Co.
Robins and Co., Inc., A. K.
Scott Viner Co.
Thermovac Inc.

Breading equipment

Bridge Machine Co.
Greer Co., J. W.
Metal-Glass Products Co.
Robins and Co., Inc., A. K.
Union Standard Equipment Co.

Briners, brine makers, salters

Biner Ellison Machinery Co.
FMC Corporation
Hardy Salt Co.
Horix Manufacturing Co.
International Salt Co.
Leslie Salt Co., Scientific Salting Div.
Morton Salt Co., Industrial Div.
Renneburg & Sons, Co., Edward
Solbern Mfg. Co.

Can openers, can and bottle crushers

American Can Co., Canco Div.
Dazey Corp., The
Edlund Co.
Langsenkamp Co., F. H.
Rescor Industries

Choppers, crushers, disintegrators

Benner-Nawman, Inc.
Berlin Chapman Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cuyler Corp., Otto W.
Dazey Corp., The
FMC Corporation
Fitzpatrick Co.
Koch Equipment Co.
Langsenkamp Co., F. H.
Pease Co., F. B.
Rietz Mfg. Co.
United Co., The

Cleaners—raw product

American Machinery Corp.
Brooks Chemicals, Inc.
Chisholm-Ryder Co., Inc.
Commercial Mfg. and Supply Co.
FMC Corporation
Ferrell and Co., A. T.
Huntley Mfg. Co.
Key Equipment Co.
McLauchlan Co., Inc., A. B.
Rice Seed Co., W. A.
Scott Viner Co.
Sinclair-Scott
United Co., The

Cookers, coolers, pasteurizers

American Machinery Corp.
Barry-Wehmiller Machy. Co.
Berlin Chapman Co.
Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Chemicolloid Labs.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Creamery Package Mfg. Co.
Cuyler Corp., Otto W.
Dundon Iron Works

BROCKWAY VISION IN GLASS

Flawless clarity and customer shelf satisfaction • Eyes feasting upon delicious foods tease appetites . . . what tempts purchase when the food is hidden? . . . The lip-smacking goodness of *your* foods comes to life when they're packaged in glass by Brockway . . . Call it shelf satisfaction, the VISION IN GLASS quality that makes a housewife want to take *your* products off the shelf and put them in her market basket . . . See for yourself—at a glance—why your foods tease sales faster in glass containers by Brockway.

BROCKWAY GLASS

COMPANY, INC., Brockway, Pennsylvania
Sales Offices in Principal Cities

SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. VA.
Tygart Valley Glass Co., Washington, Pa.
Celluplastics Inc., Newark, N. J.

Dunkley Co.
FMC Corporation
Fostoria Corp.
Fouche, Maison Frederic
General Food Equipment Co.
Girdler Process Equipment Div. Chemetron Corp.
Horix Manufacturing Co.
Huntley Mfg. Co.
Krenz Inc., Oscar
Langsenkamp Co., F. H.
Lee Metal Products Co.
Metal-Glass Products Co.
Mojonnier Bros. Co.
Palmer Co., Harold L.
Pease Co., F. B.
Pfaudler Permutit, Inc.
Renneburg & Sons, Co., Edward
Rietz Mfg. Co.
Union Standard Equipment Co.

Corers, peelers, stemmers, pitters, snippers

Ashlock Co., Geo. W.
Atlas-Pacific Engineering Co.
Canners Supply, The
Chisholm-Ryder Co., Inc.
Cuyler Corp., Otto W.
Dunkley Co.
Elliott Mfg. Co.
FMC Corporation
Filper Corp.
Huntley Mfg. Co.
Langsenkamp Co., F. H.
Magnuson Engineers, Inc.
Milwaukee Motive Mfg. Co.
Pease Co., F. B.
Robins and Co., Inc., A. K.
Toledo Scale Co.
Veg-a-Peel Co., Inc.

Cutters, dicers, slicers

Ashlock Co., Geo. W.
Atlas-Pacific Engineering Co.
Chisholm-Ryder Co., Inc.
Cuyler Corp., Otto W.
Dazey Corp., The
FMC Corporation
Fitzpatrick Co.
Greer Co., J. W.
Koch Equipment Co.
McLauchlan Co., Inc., A. B.
Olney Inc., George J.
Pease Co., F. B.
Robins and Co., Inc., A. K.
Scott Viner Co.
Sinclair-Scott
Smith's Sons Co., John E.
United Co., The
Urschel Laboratories, Inc.

Deaerators, aerators

American Machinery Corp.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Chisholm-Ryder Co., Inc.
Dole Engineering Co., James
FMC Corporation
General American Transportation Corp., Process Equipment Div.
Thermovac Inc.

Dispensers — brine, salt, sugar, syrup, etc.

Fernholtz Machinery Co.
FMC Corporation
Gray Co.
Hamachek Machine Co., Frank
Hardy Salt Co.
Langsenkamp Co., Inc., F. H.
Leslie Salt Co.
Logeman Co., C. W.
Magnuson Engineers, Inc.
Morton Salt Co., Industrial Div.

Dryers, dehydraters, evaporators, vacuum pans

Benner-Nawman, Inc.
Bowen Engineering Co.
Buflovak Equipment Division, Blow-Knox Company
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
DeLaval Separator Co.
Elliott Mfg. Co.
Fernholtz Machinery Co.
Fostoria Corp.
General American Transportation Corp., Process Equipment Div.
Girdler Process Equip. Div.
Greer Co., J. W.
Groen Mfg. Co.
Heil Co., The
Krenz Inc., Oscar
Lee Metal Products Co.
Link-Belt Co.
Metal-Glass Products Co.
Mojonnier Bros. Co.
Niagara Blower Co.
Patterson-Kelly
Pfaudler Co.
Renneburg & Sons, Co., Edward
Stokes Corp., F. J.
Thermovac Inc.

Egg Handling Equipment

Creamery Package Mfg. Co.
Food Systems, Inc.
Lathan Mfg. Co.
Western Gear Corp.

Exhausters

American Machinery Corp.
Barry-Wehmiller Machinery Co.
Berlin Chapman Co.
Christian Engineers, J. D.
Dunkley Co.
FMC Corporation
Horix Mfg. Co.
Robins and Co., Inc., A. K.

Extractors—juice, pulp

Bauer Bros. Co.
Berlin Chapman Co.
Chisholm-Ryder Co., Inc.
Citrus Equipment Co.
Cuyler Corp., Otto W.
DeLaval Separator Co.
FMC Corporation, Florida Div.
Langsenkamp Co., F. H.
The Sharples Corp.

Filling machines, can, carton, glass

Anderson Bros Mfg. Co.
Atlas-Pacific Engineering Co.
Bartelt Engineering Co., Inc.
Biner-Ellison Machinery Co.
Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Burt Co., F. L.
Chisholm-Ryder Co., Inc. of Pennsylvania

Brockway, first name in containers for:

foods
prescription ware
beer
plastic containers
pharmaceuticals and proprietaries
beverages
liquors
vials and tubing

Integrity in glass since 1907

Equipment / Supplies Index

SECTION A
Preparation and Processing Equipment

Colton Co., Arthur
Container Corp. of America
Crompton & Knowles, Redington Div.
Crown Cork & Seal Co., Inc.
Dole Engineering Co., James
Elgin Mfg. Co.
Eyrle Company
FMC Corporation
Filler Machine Co.
First Machinery Corp., Falcon Mfg. Div.
Food Packers, Inc.
Girdler Process Equipment Div. Chemetron Corp.
Gray Co.
Hayssen Mfg. Co.
Horix Manufacturing Co.
Kiefer Machine Co.
MRM Co.
Machinery Service Co.
Marathon, Div. American Can Co.
Mojonnier Bros. Co.
Multi-Fill Machine Co.
Pfaudler Co.
Robins and Co., Inc., A. K.
Saga Filling Machine Co.
Silver Creek Precision Corp.
Solbern Mfg. Co.
Thermovac Inc.
Union Standard Equipment Co.
U.S. Bottlers Machy. Co.
Wallace & Tiernan Inc.
Weigh Right Auto. Scale Co.
Woodman Co., Inc.

Filters, filter aids, strainers, centrifuges

B-I-F Industries, Inc.
Brewers & Bottlers Equipment Corp.
Cambridge Wire Cloth Co.
Centrico Inc.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Cuyler Corp., Otto W.
DeLaval Separator Co.
Dorr-Oliver
Fast Flo Corp.
Greer Co., J. W.
Ladish Corp.
Metal-Glass Products Co.
Niagara Filter Div., American Machine & Metal, Inc.
Sharples Corp.
Terriss-Consolidated Industries
Thermovac Inc.

Finishers, pulpers, comminuters

Chisholm-Ryder Co., Inc.
Citrus Equipment Corp.
Cog Corp.
Cuyler Corp., Otto W.
Dole Engineering Co., James
FMC Corporation
Fernholtz Machinery Co.
Fitzpatrick Co.
Griffith Laboratories, Inc.
Langsenkamp Co., F. H.
Rietz Mfg. Co.
Robins and Co., Inc., A. K.

What's the Address? Turn to alphabetical listings beginning on Page 53.

Forming machinery, food

Basic Food Materials, Inc.
Mayfair Products Co.

Freezing equipment, supplies—compressors, blowers, refrigerant, etc.

Allied Chemical Corp., Nitrogen Div.
Amerio Contact Plate Freezers, Inc.
Barry-Wehmiller Machinery Co.
Belt-Ice Corp.
Brewers & Bottlers Equipment Corp.
Carrier Corp.
Creamery Package Mfg. Co.
Dole Refrigerating Co.
Dunham-Bush, Inc.
Freezing Equip. Sales Co.
Frick Co.
Gardner-Denver Co.
Gardner Mfg. Co.
General American Transportation Corp., Process Equipment Div.
Greer Co., J. W.
King Co. of Owatonna
Kohlenberger Engineering Corp.
Kramer Trenton Co.
Leslie Salt Co.
Lewis Refrigeration Co.
Liquefreeze Co.
Masterfreeze Corp.
Metal-Glass Products Co.
National Research Co.
Niagara Blower Co.
Ohio Chem. & Surgical Equip. Co., Inc.
Proctor & Schwartz, Inc.
Refrigeration Appliances, Inc.
Stokes Corp., F. J.
Tranter Mfg. Co., Inc.
Union Standard Equip. Co.
Vacudyne Corp.
Vilter Mfg. Co.
York Div., Borg Warner Corp.

Freeze-dry equipment

American Sterilizer Co.
FMC Corp.
NRC Equipment Corp.
Stokes Corp., F. J.
Vacudyne Corp.

Fryers

Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Bridge Machine Co.
Central Steel and Tank Co.
Christian Engineers, J. D.

Graders, size

Allen Fruit Co., Inc.
Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Berlin Chapman Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Commercial Mfg. and Supply Co.
Cuyler Corp., Otto W.
Elliott Mfg. Co.
FMC Corporation
Ferrell and Co., A. T.
Huntley Mfg. Co.
Key Equipment Co.
Magnuson Engineers, Inc.
McLauchlan Co., A. B.
Pease Co., F. B.
Sinclair-Scott
Standard Machine Co.
Wallace and Tiernan, Inc.

Graders, quality

American Machinery Corp.
Atlas-Pacific Engineering Co.
Berlin Chapman Co.
Chisholm-Ryder Co., Inc.
Commercial Mfg. and Supply Co.
Cuyler Corp., Otto W.
Electric Sorting Machine Co. Div., Mandrel Ind., Inc.
FMC Corporation
Fischer & Porter Co.
Key Equipment Co.
Olney Inc., George J.
Wallace and Tiernan, Inc.

Heat exchangers

APV Co., Inc.
American Standard Industrial Div.
Berlin Chapman Co.
Brewers & Bottlers Equipment Corp.
Carrier Corp.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Corning Glass Works
Creamery Package Mfg. Co.
DeLaval Separator Co.
Dundon Iron Works
Dunham-Bush, Inc.
First Machinery Corp., Falcon Mfg. Div.
Fitzpatrick Co.
Frick Co.
General American Transportation Corp., Process Equipment Div.
Girdler Process Equipment Div. Chemetron Corp.
Groen Mfg. Co.
Hamilton Kettles Div., Brighton Corp.
Kramer Trenton Co.
Krenz Inc., Oscar
Langsenkamp Co., Inc., Frank
Mojonnier Brothers Co.
Niagara Blower Co.
Palmer Co., Harold L.
Patterson-Kelly
Pfaudler Permutit Inc.
Rietz Mfg. Co.
Southwestern Engineering Co.
Thermovac Inc.
Wearever Aluminum Co.

Homogenizers, emulsifiers

Chemicolloid Labs.
Cherry-Burrell Corp.
Creamery Package Mfg. Co.
Fitzpatrick Co.
Girdler Process Equipment Div. Chemetron Corp.
Groen Mfg. Co.
Koch Equipment Co.
Logeman Co., C. W.
Manton Gaulin Mfg. Co.
Metal-Glass Products Co.
Rietz Mfg. Co.
Thermovac Inc.
United Co., The

Huskers, hullers, podders, viners

Cuyler Corp., Otto W.
FMC Corporation
Hamachek Machine Co., Frank
Robins and Co., Inc., A. K.
Scott Viner Co.
United Co., The

Kettles—cooking, steam-jacketed, tilting, agitated, vacuum

Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Brewers & Bottlers Equipment Corp.
Chemicolloid Labs.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.

INVESTIGATE CALLAHAN FEATURES BEFORE INVESTING IN CAN MAKING MACHINERY

SLIT Callahan Gang Slitter, shown with automatic sheet feed attached. Ask for Specification Sheet 1321.

STAMP Callahan Automatic Strip Feed Press. Ask for Specification Sheet 1375-A.

FORM Callahan Can Bodymaker, equipped with horizontal feed and outside solder horn and set up for sanitary line. Ask for Specification Sheet 1200.

Discover the difference that keeps Callahan can machines humming at peak production long after other machines have required extensive overhaul and repair.

At first glance, you won't notice the difference. Closer inspection, however, reveals the advanced engineering, the superior castings and alloy steels, the quality components, and the meticulous machining and finishing that go into every Callahan machine. Watching the machine operate, you'll see how this devotion to detail results in greater can production, improved can quality, less maintenance, and long, trouble-free performance.

With the difference clearly in mind, you'll be surprised to learn that Callahan machines cost no more than other can making machines . . . often less.

Before you invest, investigate Callahan—whether you require a single machine or an entire automatic or semiautomatic production line. Write or phone for further information and detailed specification sheets.

CALLAHAN CAN MACHINES . . .

a complete line of slitters, body formers, beading and flanging machines, scroll shears, seamers, and other precision-made machines for short and long runs. Prompt delivery assured.

CALLAHAN
CAN MACHINE COMPANY

Division of Vermont Marble Company

71 MAIN STREET, PROCTOR, VERMONT

Equipment/Supplies Index

SECTION A
Preparation and Processing Equipment

Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cuyler Corp., Otto W.
Dundon Iron Works
Fernholtz Machinery Co.
Groen Mfg. Co.
Hamilton Kettles Div., Brighton Corp.
Hubbert and Son, Inc., B. H.
Koch Equipment Co.
Krenz Inc., Oscar
Langsenkamp Co., Inc., F. H.
Lee Metal Products Co.
Metal-Glass Products Co.
Mojonnier Bros. Co.
Pfaudler Co.
Robins and Co., Inc., A. K.
Terris-Consolidated Industries
Thermovac Inc.
Union Standard Equipment Co.
United Co., The

Lighting — grading and inspection

Macbeth Corp.
Nu-Lite Corp.

Mills and grinders

Albright Co., Thomas
Bauer Bros. Co.
Brewers & Bottlers Equipment Corp.
Chemicolloid Labs.
Cog Corp.
Day Co. Div., J. H.; Cleveland Automatic Machine Co.
Fernholtz Machinery Co.
First Machinery Corp., Falcon Mfg. Div.
Fitzpatrick Co.
Jeffrey Mfg. Co.
Manton Gaulin Mfg., Co.
Metal-Glass Products Co.
Morehouse-Cowles, Inc.
Rietz Mfg. Co.
Southwestern Engineering Co.
Sprout Waldron Co., Inc.
Stokes Corp., F. J.
Sturtevant Mill Co.
Union Standard Equipment Co.
United Co., The
U. S. Stoneware Co.

Magnetic and electronic metal separators, traps

Barkley & Dexter Labs, Inc.
Bauer Bros. Co., The
Brilmayer Laboratories, E. W.
Columbia Engineering Svc. Co.
Dings Magnetic Separator Co.
Fernholtz Machinery Co.
Genisco, Inc.
Jeffrey Mfg. Co.
Ladish Co., Tri Clover Div.
Radio Corp. of America

Presses

Albright Co., Thomas
Bauer Bros. Co.
Carver Inc., Fred S.
Cuyler Corp., Otto W.
FMC Corporation
Fernholtz Machinery Co.
Jones & Sons Co., E. D.
Renneburg & Sons, Co., Edward
Stokes Corp., F. J.

Retorts, retort crates and baskets, retort basket loaders

Atlas-Pacific Engineering Co.
Berlin Chapman Co.
Busse Bros.
Chicago Stainless Equipment Corp.
Chisholm-Ryder Co., Inc.
Cuyler Corp., Otto W.
Dundon Iron Works
FMC Corporation
Reid Boiler Works
Renneburg & Sons, Co., Edward
Robins and Co., Inc., A. K.

Screens, shakers, sifters, strainers, reels

Allen Fruit Co., Inc.
Atlas-Pacific Engineering Co.
Bauer Bros Co.
Benner-Nawman, Inc.
Cambridge Wire Cloth Co.
Central Steel and Tank Co.
Christian Engineers, J. D.
Colorado Fuel and Iron Corp.
Commerical Mfg. & Supply Co.
DeLaval Separator Co.
FMC Corporation
Fast-Flo Corp.
Fernholtz Machinery Co.
First Machinery Corp., Falcon Mfg. Div.
Green Bay Foundry & Machine Works
Huntley Mfg. Co.
Key Equipment Co.
Langsenkamp Co., F. H.
Link-Belt Co.
McLauchlan Co., A. B.
Olney Inc., George J.
Pease Co., F. B.
Productive Equipment Corp.
Scott Viner Co.
Simplicity Engineering Co.
Sinclair-Scott
Southwestern Engineering Co.
Sprout Waldron Co., Inc.
Standard Machine Co.
Steinen Mfg. Co.
Stephens-Adamson Mfg. Co.
Sturtevant Mill Co.
Syntron Co.
United Co., The

Spray nozzles

Carrier Corp.
Chain Belt Co.
D and M Products
Gray Co.
Green Bay Foundry & Mach. Works
Kromer Co., O. W.
Link-Belt Co.
Sellers Injector Corp.
Spraying Systems Co.
Steinen Mfg. Co., W. M.

Tables — inspection, peeling, trimming

Allen Fruit Co., Inc.
Atlas-Pacific Engineering Co.
American Machinery Corp.
Anderson Bros. Mfg. Co.
Benner-Nawman, Inc.
Berlin Chapman Co.
Bridge Machine Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cuyler Corp., Otto W.
Dunkley Co.
Elliott Mfg. Co.
Hamilton Kettles Div., Brighton Corp.
Huntley Mfg. Co.
Langsenkamp Co., Inc., F. H.
Link-Belt Co.
Milwaukee Motive Mfg. Co.
Pease Co., F. B.
Rapids-Standard Co.
Renneburg & Sons, Co., Edward
Robins and Co., Inc., A. K.
Terriss-Consolidated Industries

Tanks

Adair Co., Inc., Robin W.
Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Berlin Chapman Co.
Brewers & Bottlers Equipment Corp.
Butler Mfg. Co.
Chemicolloid Labs.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Chisholm-Ryder Co., Inc.
Creamery Package Mfg. Co.
Dundon Iron Works
Dunkley Co.
Frick Co.
General American Transportation Corp., Process Equip. Div.
Groen Mfg. Co.
Hamilton Kettles Div., Brighton Corp.
Hanson Equipment Co.
Krenz Inc., Oscar
Kromer Co., O. W.
Langsenkamp Co., F. H.
Lee Metal Products Co.
Metal-Glass Products Co.
Mojonnier Bros. Co.
Pease Co., F. B.
Pfaudler Permutit Inc.
Scott Viner Co.
Thermovac Inc.
Tote System, Inc.
Union Standard Equipment Co.
United Co., The
U.S. Steel Corp.

Tank Covers

Adair Co., Inc., Robin W.
Lee Metal Products Co.
Pease Co., F. B.
Union Standard Equip. Co.

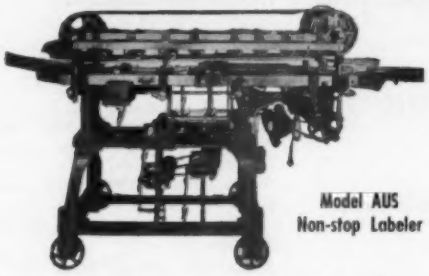
Washers—raw product

Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Berlin Chapman Co.
Central Steel and Tank Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cuyler Corp., Otto W.
Dunkley Co.
Eyrle Company
FMC Corportion
Huntley Mfg. Co.
Key Equipment Co.
McLauchlan Co., A. B.
Olney, Inc., Geo.
Renneburg & Sons, Co., Edward
Robins and Co., Inc., A. K.
Scott Viner Co.
Sinclair-Scott
Solbern Mfg. Co.
United Co., The
Veg-a-Peel Co., Inc.
Wallace and Tiernan, Inc.

What's the Address? Turn to alphabetical listings beginning on Page 53.

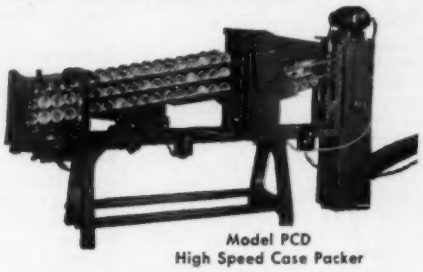
FULL SPEED AHEAD!

BURT LABELERS AND PACKERS SAVE TIME • EFFORT • MONEY



Model AUS
Non-stop Labeler

For fast, easy, economical labeling of glass, cans and cartons, you can't beat the Burt Non-Stop Labeler. Dual label feed allows labels to be replenished without stopping machine. Auxiliary feed fingers insure uniform label position.



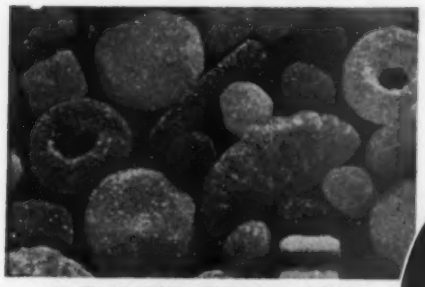
Model PCD
High Speed Case Packer

A single stroke of the Burt High-Speed Case Packer packs a 24-can, 2-layer case. Then the case is upended without manual effort. All the operator does is position the case. It's the fastest, most efficient can handling method available.

BURT

For the money-saving facts write to:

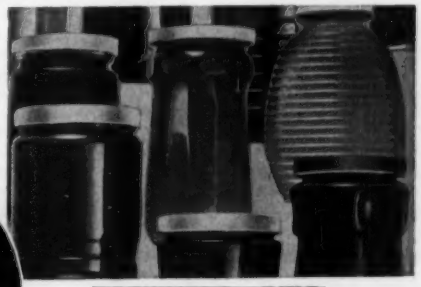
BURT MACHINE COMPANY
401 EAST OLIVER STREET
BALTIMORE 2, MARYLAND



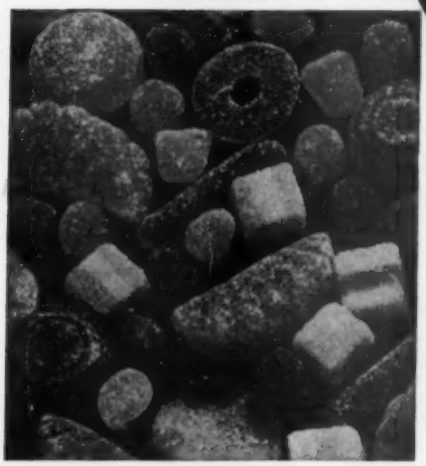
CONFECTO-JEL
Especially made for
Jellied Candies

better product
consistency and
quality for
over 40 years

SPEAS
APPLE
PECTINS



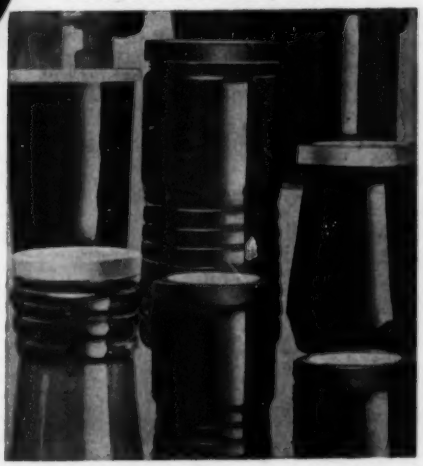
NUTRL-JEL
Regular and Slow Set
For Finest Jams, Jellies and Preserves



- Adaptable to wide range of PH levels.
- Neutral color and flavor—blends naturally with more different fruits than any other pectin.
- Gives product resiliency to avoid breakage during shipping.
- Improves spreadability of jams, jellies and preserves.
- Standardized to uniform strength so that product always has the same consistency.

Write, wire or phone for full information, technical advice, or location of nearest warehouse.

SPEAS COMPANY
GENERAL OFFICES • KANSAS CITY 20, MO.



SECTION B
Food Ingredients and Additives

Acids, edible
American Maize Products Co.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
Bzura Chemical Co.
Clinton Corn Processing Co.
Du Pont de Nemours & Co., E. I.
Hoffmann-LaRoche, Inc.
Merck and Co.
Miles Chemical Co. Div., Miles Laboratories, Inc.
Penick & Co., S. B.
Pfizer & Co., Chas.

Antioxidants
Archibald & Kendall, Inc.
Baltimore Spice Co.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
Du Pont de Nemours & Co., E. I.
Fritzsche Brothers, Inc.
Griffith Laboratories, Inc.
Guardian Chemical Corp.
Hercules Powder Co.
Hoffmann-LaRoche, Inc.
Merck and Co.
Miles Chemical Co. Div., Miles Laboratories, Inc.
Nopco
Penick & Co., S. B.
Pfizer & Co., Chas.
Staley Mfg. Co., A. E.
Stange Company, Wm. J.

Beta carotene
Hoffmann-LaRoche, Inc.
Nopco
Pfizer & Co., Chas.

Breading, batter, etc.
Basic Food Materials, Inc.
Griffith Laboratories, Inc.
General Mills, Special Commodities Div.

Calcium chloride
Baker Chemical Co., J. T.

Citrus oils, juices, products
Dodge and Olcott, Inc.
Firmenich, Inc.
Florasynth Laboratories, Inc.
Food Materials Corp.
Fritzsche Brothers, Inc.
Hutchinson & Co., D. W.
International Flavors & Fragrances
Magnus, Mabee & Reynard, Inc.
Mutual Citrus Products
Penick & Co., S. B.
Reynaud, Ltd.
Sterwin Chemicals, Inc.
Sunkist Growers Products Sales Dept.

Colors, certified food
Archibald & Kendall, Inc.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
Dodge and Olcott, Inc.
Florasynth Laboratories, Inc.
Food Materials Corp.
Fritzsche Brothers, Inc.
Glidden Co.
Griffith Laboratories, Inc.
Hoffmann-LaRoche, Inc.
Magnus, Mabee & Reynard, Inc.
Stange Company, Wm. J.
Union Starch and Refining Co.
Warner-Jenkinson Mfg. Co.
Woolson Spice Co.

Enzymes
Basic Food Materials, Inc.
Miles Chemical Co. Div., Miles Laboratories, Inc.
Nopco
Penick & Co., S. B.
Rohm & Haas Co.

Essential oils
Baltimore Spice Co.
Dodge and Olcott, Inc.
Felton Chemical Co., Inc.
Firmenich, Inc.
Food Materials Corp.
Florasynth Laboratories, Inc.
Fritzsche Brothers, Inc.
Givauden Flavors, Inc.
Hutchinson & Co., D. W.
International Flavors & Fragrances
Magnus, Mabee & Reynard, Inc.
Mayer & Sons Co., H. J.
Penick & Co., S. B.
Reynaud, Ltd.
Standardized Products Co.
Stange Company, Wm. J.
Ungerer & Co.

Flavors, flavor bases
Basic Food Materials, Inc.
Dodge and Olcott, Inc.
Dow Chemical Co.
Firmenich, Inc.
Florasynth Laboratories, Inc.
Food Materials Corp.
Fries & Fries, Inc.
Fritzsche Brothers, Inc.
Givauden Flavors, Inc.
Glidden Co.
Griffith Laboratories, Inc.
Hutchinson & Co., D. W.
International Flavors & Fragrances
Kohmstamm & Co., Inc., H.
Liquid Carbonic, Div. of General Dynamics
Magnus, Mabee & Reynard, Inc.
Mayer & Sons Co., H. J.
Penick & Co., S. B.
Reynaud, Ltd.
Rhodia, Inc.
Shulton, Inc., Fine Chem. Div.
Standardized Products Co.
Sterwin Chemicals, Inc.
Vico Products Co.
Warner-Jenkinson Mfg. Co.

Garlic, onion (powdered)
Archibald & Kendall, Inc.
Baltimore Spice Co.
Basic Food Materials, Inc.
Basic Vegetable Products
California Vegetable Concentrates, Inc.
Florasynth Laboratories, Inc.
Gentry Div., Consolidated Foods Corp.
Glidden Co.
Griffith Laboratories, Inc.
Mayer & Sons Co., H. J.
Penick & Co., S. B.
Puccinelli Packing Co.
Stange Co., Wm. J.
Woolson Spice Co.

Gelatin
Griffith Laboratories, Inc.
Moyer & Sons Co., H. J.
Penick & Co., S. B.

Gums, balsams
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Marine Colloids, Inc.
Mayer & Sons Co., H. J.
Morningstar-Paisley, Inc.
Penick & Co., S. B.

Meat
Somerville Dressed Meat Co.

Monosodium glutamate
Glidden Co.
Great Western Sugar Co.
Griffith Laboratories, Inc.
Hercules Powder Co.
International Minerals & Chemical Corp.
Mayer & Sons Co., H. J.
Merck and Co.
Woolson Spice Co.

Oils, vegetable
Archer-Daniels-Midland Co.
Central Soya Co., Inc.
Clinton Corn Processing Co.
Glidden Co.
Pacific Vegetable Oil Corp.
Penick & Co., S. B.
Staley Mfg. Co., A. E.

Oleoresins
Archibald & Kendall, Inc.
Baltimore Spice Co.
Dodge and Olcott, Inc.
Florasynth Laboratories, Inc.
Fries & Fries, Inc.
Fritzsche Brothers, Inc.
Griffith Laboratories, Inc.
International Flavors & Fragrances
Magnus, Mabee & Reynard, Inc.
Penick & Co., S. B.
Reynaud, Ltd.
Standardized Products Co.
Stange Company, Wm. J.

Paprika
Archibald & Kendall, Inc.
Baltimore Spice Co.
Gentry Div., Consolidated Foods Corp.
Glidden Co.
Griffith Laboratories, Inc.
Magnus, Mabee & Reynard, Inc.
Mayer & Sons Co., H. J.
Penick & Co., S. B.
Stange Company, Wm. J.
Woolson Spice Co.

Pectin
Mutual Citrus Products
Penick & Co., S. B.
Speas Co.
Sunkist Growers

Pepper, pepper products
Archibald & Kendall, Inc.
Baltimore Spice Co.
Gentry Div., Consolidated Foods Corp.
Glidden Co.
Griffith Laboratories, Inc.
Mayer & Sons Co., H. J.

Want More Information?

On a Gold Medal Award Winner

Or any of the Bulletins?

Just circle the proper number

Do you want more information on any of the winners of a Canner/Packer Gold Medal Award?

Or any of the bulletins listed in the classified directory of bulletins?

Simply circle the number of the item (1 to 41 for the Gold Medal Awards and 100 to 200 for bulletins, brochures and catalogues.)

Canner/Packer will ask the manufacturer or supplier to send the information or the catalogue to you.

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BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 51344. CHICAGO, ILLINOIS

Editorial Department
CANNER/PACKER
59 E. Monroe St.
Chicago 3, Illinois

● **Please Send Information on Numbers Circled Below:**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	33	34	35	36	37
38	39	40	41												100	101	102
103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138
139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174
175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199											

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157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174
175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199											

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FIRST CLASS PERMIT NO. 51344. CHICAGO, ILLINOIS

Editorial Department
CANNER/PACKER
59 E. Monroe St.
Chicago 3, Illinois

Penick & Co., S. B.
Stange Company, Wm. J.
Woolson Spice Co.

Protein Supplements

Archer-Daniels-Midland Co.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
Griffith Laboratories, Inc.
Gunther Products, Inc.
Hercules Powder Co.
Kraft Foods Div.
The Nestle Co., Inc.
Shulton, Inc.
Staley Mfg. Co., A. E.

Salt

Diamond Crystal Salt Co.
Hardy Salt Co.
International Salt Co.
Leslie Salt Co.
Morton Salt Co., Industrial Div.

Seasonings

Archibald & Kendall, Inc.
Baltimore Spice Co.
Dodge and Olcott, Inc.
Florasynth Laboratories, Inc.
Gentry Div., Consolidated Foods Corp.
Glidden Co.
Great Western Sugar Co.
Griffith Laboratories, Inc.
Hercules Powder Co.
Knickerbocker Mills
Magnus, Mabee & Reynard, Inc.
Mayer & Sons Co., H. J.
Penick & Co., S. B.
Standardized Products Co.
Stange Company, Wm. J.
Vico Products Co.
Woolson Spice Co.

Soup bases

Archibald & Kendall, Inc.
California Vegetable Concentrates, Inc.
Firmenich, Inc.
Griffith Laboratories, Inc.
Mayer & Sons Co., H. J.
Stange Company, Wm. J.
Vico Products Co.

Spices

Archibald & Kendall, Inc.
Baltimore Spice Co.
Firmenich, Inc.
First Spice Mixing Co., Inc.
Florasynth Laboratories, Inc.
Food Materials Corp.
Gentry, a Div. of Consolidate Foods Corp.
Glidden Co.
Griffith Laboratories, Inc.
Knickerbocker Mills
McCormick & Co., Inc.
Mayer and Sons Co., H. J.
Penick & Co., S. B.
Standardized Products Co.
Stange Company, Wm. J.
Woolson Spice Co.

Stabilizers, binders

Abbott Laboratories
American Maize Products Co.
American Viscose Corp.
Archibald & Kendall, Inc.
Atlas Chemical Industries Co.
Baltimore Spice Co.
Beatrice Foods Co.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
Central Soya Co., Inc.
Dow Chemical Co.
Glidden Co.
Griffith Laboratories, Inc.
Gunther Products, Inc.
Hercules Powder Co.
Hubinger Co.
Kelco Co.
Marine Colloids, Inc.
Morningstar-Paisley Products, Inc.
National Starch & Chem. Corp.
Penick & Co., S. B.
Shulton, Inc.

Starch

American Maize Products Co.
Anheuser-Busch, Inc.
Clinton Corn Processing Co.
Corn Products Co.
Hercules Powder Co.
Hubinger Co.
Morningstar-Paisley Products, Inc.
National Starch & Chem. Corp.
Penick & Ford, Ltd.
Quaker Oats Co.
Staley Mfg. Co., A. E.
Stanley Blackman Labs., Inc.
Union Starch and Refining Co.

Sweeteners—beet, cane, corn

Amalgamated Sugar Co.
American Maize Products Co.
American Molasses Co.
American Sugar Refining Co.
Anheuser-Busch, Inc.
California & Hawaiian Sugar Refining Corp.
Clinton Corn Processing Co.
Corn Products Co.
Great Western Sugar Co.
Holly Sugar Corp.
Hubinger Co.
National Sugar Refining Co.
Penick & Ford Ltd., Inc.
Pepsi-Cola Co.
Refined Syrups and Sugars, Inc.
Spreckels Sugar Company
Staley Mfg. Co., A. E.
Sugarine, Inc.
Union Starch and Refining Co.
Union Sugar Div., Consolidated Foods Corp.
Utah-Idaho Sugar Co.
Western Condensing Co.

Sweeteners—non-caloric

Abbott Laboratories
Griffith Laboratories, Inc.
Mutual Citrus Products
Penick & Co., S. B.
Pfizer & Co., Chas.

Vegetables, dehydrated

Basic Vegetable Products
California Vegetable Concentrates, Inc.
Gentry Div., Consolidated Foods Corp.
Glidden Co.
Morningstar-Paisley Products, Inc.
Puccinelli Packing Co.
Rogers Brothers Co., Food Products Div.
Standardized Products Co.

Vinegar

Richter Sons Co., A. M.
Speas Co.

Vitamin products

Hoffmann-La Roche, Inc.
Merck and Co.
Nopco
Penick & Co., S. B.
Pfizer & Co., Chas.
Vico Products Co.

Yeasts

Lake State Yeast & Chem. Co.
Vico Products Co.

SECTION C

Raw Product Equipment and Supplies

Boxes, crates, bins, hampers

American Box Corp.
Currie Machinery Co.
General Box Co.
Lewis, G. B.
Martin Bros. Container and Timber Products
Old Dominion Box Co., Inc.
Republic Steel Corp.
Stone Container Corp.
Tote Systems, Inc.
Waldorf Paper Products Co.

Canvas Equipment

Associated Bag & Apron Company
Dow Canvass Products Co.

Dusters

Buffalo Turbine Agricultural Equipment Co.
FMC Corporation
Myers & Bro. Co., F. E.

Fertilizers, plant food

Allied Chemical Corp., Nitrogen Div.
American Cyanamid Co.
California Chemical Co., Ortho Div.
Collier Carbon & Chem. Corp.
Du Pont de Nemours & Co., E. I.
Hercules Powder Co.
International Minerals & Chemical Corp.
Monsanto Chemical Co.
Olin Mathieson Chemical Corp.
Sohio Chemical Co.
Stauffer Chemical Co.
U.S. Steel Corp.

Fungicides

American Cynamid Co.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
FMC Corp.
Monsanto Chemical Co.
Pennsalt Chemicals Corp.
Phelps Dodge Refining Corp.
Rohm & Haas Co.
Stauffer Chemical Co.
Union Carbide Chemical Co.
U.S. Rubber Co., Naugatuck Chems. Div.

Harvesters, combines

Allis-Chalmers Manufacturing Co.
Champion Corp.
Chisholm-Ryder Co., Inc.
Cuyler Corp., Otto W.

SECTION C
Raw Product Equipment and Supplies

FMC Corporation
Farmhand Div., Superior Separator Co.
Hume Company, H. D.
NuWay Harvester Co.
Paulson Bros. Industries, Inc.
Porter-Way Harvester Mfg. Co.
Robins and Co., Inc., A. K.
Scott Viner Co.

Herbicides (weed killers)

American Cynamid Co.
Braun-Knecht-Heimann Div., Van Waters & Rogers, Inc.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
FMC Corporation, Niagara Chem. Div.
Geigy Agricultural Chemicals
Pennsalt Chemicals Corp.
Monsanto Chemical Co.
Pittsburgh Plate Glass Co., Chemical Div.
Sanfax Co.
Standard Agricultural Chemicals, Inc.
Stauffer Chemical Co.
U.S. Rubber Co., Naugatuck Chems. Div.

Insecticides

American Cynamid Co.
Brooks Chemicals, Inc.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
Diversey Corp.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
Fairfield Chemicals, FMC Corporation
Geigy Agricultural Chemicals
Hercules Powder Co.
Holcomb Mfg. Co., J. I.
Monsanto Chemical Co.
Penick & Co., S. B.
Pennsalt Chemicals Corp.
Rohm & Haas Co.
Sanfax Co.
Shell Chemical Co.
Stauffer Chemical Co.
Union Carbide Chemical Co.
U.S. Rubber Co., Naugatuck Chems. Div.

Irrigation equipment

Champion Corp.
FMC Corp., John Bean Div.
Fairbanks, Morse & Co.
Fernholtz Machinery Co.
Industrial Instruments, Inc.
Myers & Bro. Co., F. E.

Nailing Machines—boxes, bins, pallets, etc.

General Nailing Machine Co.
Spotnails, Inc.

Seed inoculants, disinfectants

California Chemical Co., Ortho Div.
Castle, Inc., A. L.
Du Pont de Nemours & Co., E. I.
FMC Corp., Niagara Chemical Div.
Kromer Co., O. W.
Stauffer Chemical Co.
U. S. Rubber Co., Naugatuck Chem. Div.

Seeds and plants, canning and freezing varieties

Asgrow Seed Co.
Burpee Co., W. Atlee
Burrell Seed Growers Co., D. V.
Castle, Inc., A. L.
Charter Seed Co.
Corneli Seed Co.
Ferry-Morse Seed Co.
Gallatin Valley Seed Co.
Morrison Bros. Seed Co., Dishman Branch
Northrup King & Co.
Peto Seed Co.
Pure Line Seeds, Inc.
Robinson & Sons, Lawrence
Rogers Bros. Co.
Seed Research Specialists
Sweet Corn Research, Inc.

Soil fumigants

California Chemical Co., Ortho Div.
Castle, Inc., A. L.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
FMC Corporation, Niagara Chem. Div.
Shell Chemical Corp.
Stauffer Chemical Co.
Union Carbide Chemical Co.

Soil testing equipment and supplies

Industrial Instruments, Inc.

Soil conditioners and supplements

California Chemical Co., Ortho Div.
Ludlow Corp.

Sprayers, power

Buffalo Turbine Agricultural Equipment Co.
FMC Corporation, John Bean Div.
Fernholtz Machinery Co.
Gray Co.
Hanson Equipment Co.
Hardie Mfg. Co., Inc.
Kromer Co., O. W.
Myers & Bro. Co., F. E.

Transplanters, planters, supplies

Ball, Inc., George J.
Holland Transplanter Co.

Viners, pea and bean

Cuyler Corp., Otto W.
Hamachek Machine Co., Frank
Scott Viner Co.

Wood preservatives for field boxes, etc.

American Box Corp.
Chapman Chemical Co.
Chem-Guard Products, Inc.
Darworth, Inc.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
Phelps Dodge Refining Corp.
Protection Products Mfg. Co.
Scientific Chemicals, Inc.

What's the Address? Turn to alphabetical listings beginning on Page 53.

SECTION D
Maintenance, Lubrication, Sanitation Equipment and Supplies

Aprons, gloves, uniforms, hair nets and caps, etc.

Associated Bag & Apron Co.
Canners Supply, The
Creamery Package Mfg. Co.
Edmont Inc.
Freezerwear Co., Div. Flexa Corp of America
Goodrich Industrial Products Co., B. F.
Hood Industrial Gloves & Footwear
Paperlynen Co.
Wilson Rubber Co.

Brooms, brushes, wiping cloths

Canners Supply, The
Cherry-Burrell Corp.
Creamery Package Mfg. Co.
Holcomb Mfg. Co.
Jenkins Sons Inc., M. W.
Kimberly-Clark Corp.
Klenzade Products, Inc.

Cement, corrosion - resistant, patching compounds, floor surfacing, etc.

Armstrong Cork Co.
Creamery Package Mfg. Co.
Fuller Co., H. B.
Hodges Chemicals Co.
Master Mechanics Co.
Minnesota Mining & Mfg. Co.
Pennsalt Chemicals Corp.
Stonhard Co., Inc.
Truscon Laboratories

Chairs, stools

Ajusto Equipment Co.

Compounds, anti-rust

Diversey Corp.
DuBois Chemicals, Inc.
Du Pont de Nemours & Co., E. I.
Economics Lab., Inc.
Keystone Lubricating Co.
Miranol Chemical Co.
Oakite Products, Inc.
Wyandotte Chemicals Corp., J. B. Ford Div.

Compounds, container-washing

Brooks Chemicals, Inc.
Cherry-Burrell Corp.
Diversey Corp.
DuBois Chemicals, Inc.
Du Pont de Nemours & Co., E. I.
Economics Lab., Inc.

Gray Co.
Klenzade Products, Inc.
Miranol Chemical Co.
Oakite Products, Inc.
Pennsalt Chemicals Corp.
Wyandotte Chemicals Corp., J. B. Ford Div.

Compounds, germicidal, disinfectant

Braun-Knecht-Heimann Div., Van Waters & Rogers Inc.
Diversey Corp.
Du Pont de Nemours & Co., E. I.
Economics Lab., Inc.
Griffith Laboratories, Inc.
Holcomb Mfg. Co.
Johnson-March Corp.
Klenzade Products, Inc.
Multi-Clean Products, Inc.
Oakite Products, Inc.
Onyx Oil & Chemical Co.
Pennsalt Chemicals Corp.
Rhodia, Inc.
Rohm & Haas Co.
Scientific Chemicals, Inc.
Wallace and Tiernan, Inc.
Wyandotte Chemicals Corp., J. B. Ford Div.

Compounds, hand-cleaning and hand-protection

Diversey Corp.
DuPont de Nemours & Co., Inc.
Finnell System, Inc.
Holcomb Mfg. Co., J. I.
Klenzade Products, Inc.
Oakite Products, Inc.
Sanfax Co.

Compounds, plant cleaning

Brooks Chemicals, Inc.
Cherry-Burrell Corp.
Clayton Mfg. Co.
Detrex Chemical Industries, Inc.
Diversey Corp.
DuBois Chemicals, Inc.
Economics Lab., Inc.
Finnell System, Inc.
Gray Co.
Klenzade Products, Inc.
Miranol Chemical Co.
Multi-Clean Products, Inc.
Oakite Products, Inc.
Pennsalt Chemicals Corp.
Pittsburgh Plate Glass Co.
Rhodia Inc.
Sanfax Co.
Solventol Chemical Products
Wallace and Tiernan, Inc.
Wyandotte Chemicals Corp., J. B. Ford Div.

Compounds, scale removal

Brooks Chemicals, Inc.
Clayton Mfg. Co.
Diversey Corp.
Dow Chemical Co.
DuBois Chemicals, Inc.
Du Pont de Nemours & Co., E. I.
Economics Lab., Inc.
Klenzade Products, Inc.
Oakite Products, Inc.
Pennsalt Chemicals Corp.
Wyandotte Chemicals Corp., J. B. Ford Div.

Equipment, cleaning (guns, etc.)

Allen Machinery & Equipment Co.
Champion-Pneumatic Machy. Co.
Circo Equipment Co.
Clayton Mfg. Co.
D and M Products, Inc.
Diversey Corp.
DuBois Chemicals, Inc. . .
Economics Lab., Inc.
Farquhar Div., A. B., The Oliver Corp.
Gray Co.
Oakite Products, Inc.
Sellers Injector Corp.

Equipment, in-plant chlorination

Diversey Corp.
DuBois Chemicals, Inc.
Fischer & Porter Co.
Klenzade Products, Inc.
Roy Co., Milton
Wallace and Tiernan, Inc.

Equipment, insect-killing, insect-repelling

Curtis Automotive Devices, Inc.
Diversey Corp.
Gardner Mfg. Co.
Hanson Equipment Co.
Holcomb Mfg. Co.
King Co. of Owatonna

Equipment, other maintenance

Fernholtz Machinery Co.
Gardner-Denver Co.
Gray Co.
Holcomb Mfg. Co.
Multi-Clean Products, Inc.
Palmer Co., Harold L.
Sellers Injector Corp.
Stewart-Warner Corp.
Terriss-Consolidated Industries

Floor mats

Armstrong Cork Co.
Creamery Package Mfg. Co.
Goodrich, B. F.
Holcomb Mfg. Co.
La Port Mat & Mfg. Co.
Ton-Tex Corp.

Fumigants, fumigating equipment and service

American Cynamid Co.
Dow Chemical Co.

Ice machines

Belt Ice Corp.
Carrier Corp.
Frick Co.
Kohlenberger Engineering Corp.
Link-Belt Co.
Vilter Mfg. Corp.
York Div., Borg-Warner Corp.

Insulation — pipe, boiler, freezer, cold storage, doors

Armstrong Cork Co.
Belt-Ice Corp.
Clark Door Co.
Dow Chemical Co.
Fibreboard Paper Products Corp.
Jamison Cold Storage Door Co.
Ludlow Corp.
Masterfreeze, Corp.
United Cork Companies

SECTION D
Maintenance, Lubrication, Sanitation, Equipment & Supplies

Lubricants, greases, oils

Cherry-Burrell Corp.
Diversey Corp.
Dow Corning Corp.
Famous Lubricants, Inc.
Keystone Lubricating Co.
Lubriplate Div., Fiske Bros. Refining Co.
Richfield Oil Corp.
Standard Oil Co. of Calif.
Stewart-Warner Corp.

Lockers, metal bins

Republic Steel Corp.

Odor control chemicals and equipment

Airkem, Inc.
Braun-Knecht-Heimann, Div., Van Waters & Rogers, Inc.
Brooks Chemicals, Inc.
Diversey Corp.
Dow Chemical Co.
DuBois Chemicals, Inc.
Florasynth Laboratories, Inc.
Holcomb Mfg. Co.
Klenzade Products, Inc.
Oakite Products, Inc.
Penick & Co., S. B.
Renneburg & Sons, Co., Edward
Rhodia, Inc.
Roy Co., Milton
Sanfax Co.
Wallace and Tiernan, Inc.

Paints, conventional

Canners Supply, The
Chem-Guard Products, Inc.
Cherry-Burrell Corp.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
Fibreboard Paper Products Corp.
Truscon Laboratories

Paints, corrosion - resistant, germicidal, etc.

Champion Bronze Powder & Paint Co., Inc.
Chem-Guard Products, Inc.
Cherry-Burrell Corp.
Creamery Package Mfg. Co.
Dow Chemical Co.
Dow Corning Corp.
Du Pont de Nemours & Co., E. I.
Fuller Co., H. B.
Koch Equipment Co.
Pennsalt Chemicals Corp.
Rust-Oleum Corp.
Scientific Chemicals, Inc.
Stonhard Co., Inc.
Truscon Laboratories

Process chemicals, defoamers, caustics for peeling, aerosol propellants, inert gasses, etc.

Baker Chemical Co., J. T.
Braun-Knecht-Heimann, Div. of Van Waters & Rogers, Inc.
Dow Corning Corp.
Gas Atmosphere, Inc.
Oakite Products, Inc.
Process Chemicals Co.
U. S. Rubber Co.
Wyandotte Chemicals Corp., J. B. Ford Div.

Waste disposal equipment and systems

B-I-F Industries, Inc.
Chain Belt Co.
Champion Corp.
Fernholtz Machinery Co.
Fischer & Porter Co.
Green Bay Foundry & Mach. Works
Jeffrey Mfg. Co.
Link Belt Co.
Productive Equipment Corp.
Robins and Co., Inc., A. K.
Roy Co., Milton
Wallace and Tiernan, Inc.
Yeomans Bros. Co.

Water conditioning equipment

B-I-F Industries, Inc.
Barnstead Still and Sterilizer Co.
Brooks Chemicals, Inc.
Chicago Stainless Equipment Corp.
Clayton Mfg. Co.
Cochrane Corp.
Green Bay Foundry & Mach. Works
Infilco, Inc.
Klenzade Products, Inc.
Roy Co., Milton
Terriss-Consolidated Industries.
Wallace and Tiernan, Inc.

SECTION E
Handling, Conveying and Power Equipment

Bearings

Chain Belt Co.
Dodge Mfg. Corp.
Dunkley Co.
Link-Belt Co.
Stephens-Adamson Mfg. Co.

Belt fasteners and lacers

Canners Supply, The
Clipper Belt Lacer Co.
Dunkley Co.
Globe Woven Belting Co., Inc.
Goodrich Industrial Products Co., B. F.
Ton-Tex Corp.
Voss Belting and Spec. Co.

Belting, conveyor and inspection

Alloy Wire Belt Co.
American Steel and Wire Div.
Ashworth Bros., Inc.
Bridge Machine Co.
Buffalo Weaving & Belting Co.
Burrell Belting Co.
Cambridge Wire Cloth Co.
Cherry-Burrell Corp.
Cyclone Fence Dept., American Steel & Wire Div., U.S. Steel
FMC Corporation
Fabreka Products Co.
Fostoria Corp.
Gates Rubber Co., The
Globe Woven Belting Co., Inc.
Goodrich Industrial Products Co., B. F.
Hamachek Machine Co., Frank
La Port Mat & Mfg. Co.
Link-Belt Co.
Robins and Co., Inc., A. K.
Russell Mfg. Co.
Sandvik Steel, Inc., Belt Conveyor Div.
Standard Conveyor Co.
Thermoid Div., H. K. Porter Co., Inc.
Ton-Tex Corp.
U. S. Rubber Co.
Voss Belting and Spec. Co.

Belting, power transmission

Dodge Mfg. Corp.
Fabreka Products Co.
Gates Rubber Co.
Globe Woven Belting Co., Inc.
Goodrich Industrial Products Co., B. F.
Hamachek Machine Co., Frank
Link-Belt Co.
Russell Mfg. Co.
Thermoid Div., H. K. Porter Co., Inc.
Ton-Tex Corp.
U. S. Rubber Co.
Voss Belting and Spec. Co.

Belting, woven wire

Alloy Wire Belt Co.
American Steel & Wire Div., U. S. Steel
Ashworth Bros., Inc.
Audubon Metalweave Belt Div.
Bridge Machine Co.
Burrell Belting Co.
Cambridge Wire Cloth Co.
Colorado Fuel and Iron Corp.
Dunkley Co.
Fostoria Corp.
Key Equipment Co.
Pacific Wire Works Co.
Robins and Co., Inc., A. K.
Thermoid Div., H. K. Porter Co.
U. S. Rubber Co.
Voss Belting and Spec. Co.

Boilers, related equipment

American-Standard Industrial Div.
Brewers & Bottlers Equipment Corp.
Butler Mfg. Co.
Cherry-Burrell Corp.
Clayton Mfg. Co.
Cochrane Corp.
Dundon Iron Works
Orr & Sembower, Inc.
Pick Mfg. Co.

Bulk storage equipment

Butler Mfg. Co.
Corrigan Co., Inc., J. C.
Dundon Iron Works
Fluidizer Co., Div. of Daffin Corp.
General American Transportation Corp., Process Equipment Div.
Pfaudler Permutit Inc.
Smith Corp., A. O.
Sprout Waldron Co., Inc.
Stephens-Adamson Mfg. Co.
Thermovac Inc.
Tote Systems, Inc.

Conveyors and elevators — apron and slat

Alvey Conveyor Mfg. Co.
American Machinery Corp.
Benner-Nawman, Inc.
Bridge Machine Co.
Buschman Co., E. W.
Chain Belt Co.
Christian Engineers, J. D.
Commercial Mfg. & Supply Co.
Corrigan Co., Inc., J. C.
Farquhar Div., A. B., Conveyor Systems, Inc.
Greer Co., J. W.
Island Equipment Corp.
Jeffrey Mfg. Co.
Link-Belt Co.
Mathews Conveyor Co.
National Five-Point, Inc.
Rapids-Standard Co.
Robins and Co., Inc., A. K.
Scott Viner Co.
Standard Conveyor Co.

Conveyors and elevators—belt

Alvey Conveyor Mfg. Co.
Alvey-Ferguson Co.
American Can Co.
American Machinery Corp.
Bemis Bros. Bag Co.
Benner-Nawman, Inc.
Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Buschman Co., E. W.
Chain Belt Co.
Cherry-Burrell Corp.
Christian Engineers, J. D.
Commercial Mfg. & Supply Co.
Corrigan Co., Inc., J. C.
Creamery Package Mfg. Co.
Dunkley Co.
Farquhar Div., A. B., Conveyor Systems Inc.
First Machinery Corp., Falcon Mfg. Div.
Globe Woven Belting Co., Inc.
Goodrich Industrial Products Co., B. F.
Greer Co., J. W.
Hamachek Machine Co., Frank
Howe Scale Co.
Island Equipment Corp.
Jeffrey Mfg. Co.
Link-Belt Co.
Mathews Conveyor Co.
National Five-Point, Inc.
Pease Co., F. B.
Peco Corp.
Rapids-Standard Co.
Renneburg & Sons, Co., Edward
Robins and Co., Inc., A. K.
Sandvik Steel, Inc., Belt Conveyor Div.
Sprout Waldron Co., Inc.
Standard Conveyor Co.
Stephens-Adamson Mfg. Co.
Sturtevant Mill Co.
Terriss-Consolidated Industries
Thermoid Div., H. K. Porter Co., Inc.
Veg-a-Peel Co., Inc.
Weigh Right Auto. Scale Co.

Conveyors and elevators — bucket

American Machinery Corp.
Benner-Nawman, Inc.
Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Butler Mfg. Co.
Chain Belt Co.
Christian Engineers, J. D.
Corrigan Co., Inc., J. C.
Ferrell and Co., A. T.

What's the Address? Turn to alphabetical listings beginning on Page 53.

S

STANGE

makes seasoning a science

The ability to create and produce a seasoning to meet your exact needs, plus the assurance that it is in compliance with Food Additive Laws—*IS A SCIENCE AT STANGE.*

The ability and versatility to produce seasonings such as Soluble, Liquid, 50-A Microground® and Ground for all types of finished products *IS A SCIENCE AT STANGE.*

The technical skill to control the flavor potency of each and every shipment to precise specifications—*IS A SCIENCE AT STANGE.*

The talent to create . . . the skill to produce . . . and the flexibility to fit your needs—*IS THE MOTTO AT STANGE.*

WM. J. STANGE CO., Chicago 12, Ill.
Paterson 4, N. J.—Oakland 21, Calif.
Canada: Stange-Pemberton, Ltd., Toronto, Ont.
Mexico: Stange-Pesa, S. A., Mexico City

50-A Microground Spice® NDGA Antioxidant® Ground Spice
Cream of Spice Soluble Seasoning®
Peacock Brand Certified Food Color®

PRINTED IN U.S.A.

SECTION E
Handling, Conveying and Power Equipment

FMC Corporation
Food Packers, Inc.
Goodrich Industrial Products Co., B. F.
Greer Co., J. W.
Huntley Mfg. Co.
Jeffrey Mfg. Co.
Link-Belt Co.
Lynch Corp.
National Five-Point, Inc.
Renneburg & Sons, Co., Edward
Robins and Co., Inc., A. K.
Scott Viner Co.
Sprout Waldron Co., Inc.
Stephens-Adamson Mfg. Co.
Sturtevant Mill Co.
Weigh Right Auto. Scale Co.

Conveyors and elevators—chain

Alvey Conveyor Mfg. Co.
American Can Co.
American Machinery Corp.
Barry-Wehmiller Machinery Co.
Benner-Nawman, Inc.
Biner Ellison Machinery Co.
Bridge Machine Co.
Buschman Co., E. W.
Chain Belt Co.
Cherry-Burrell Corp.
Christian Engineers, J. D.
Commerical Mfg. & Supply Co.
Corrigan Co., Inc., J. C.
Diamond Chain Co., Inc.
Farquhar Div., A. B., Conveyor Systems, Inc.
First Machinery Corp., Falcon Mfg. Div.
Goodrich Industrial Products Co., B. F.
Greer Co., J. W.
Hamachek Machine Co., Frank
Horix Manufacturing Co.
Island Equipment Corp.
Jeffrey Mfg. Co.
Lathrop Paulson Co.
Link-Belt Co.
Mathews Conveyor Co.
Mojonnier Bros. Co.
National Five-Point, Inc.
Pease Co., F. B.
Robins and Co., Inc., A. K.
Standard Conveyor Co.
Veg-a-Peel Co., Inc.

Conveyors—hydraulic and pneumatic

Barry-Wehmiller Machinery Co.
Benner-Nawman, Inc.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Creamery Package Mfg. Co.
Fluidizer Div., Superior Separator Co.
General American Transportation Corp., Process Equip. Div.
Greer Co., J. W.
Mathews Conveyor Co.
National Five-Point, Inc.
Peco Corp.
Scott Viner Co.
Sprout Waldron Co., Inc.
Yeomans Bros. Co.

Conveyors and elevators—roller or wheel

Alvey Conveyor Mfg. Co.
American Machinery Corp.
Benner-Nawman, Inc.

Index

Brewers & Bottlers Equipment Corp.
Buschman Co., E. W.
Cherry-Burrell Corp.
Farquhar Div., A. B., The Oliver Corp.
Greer Co., J. W.
Magline, Inc.
Mathews Conveyor Co.
National Five-Point, Inc.
Rapids-Standard Co.
Standard Conveyor Co.

Conveyors and elevators — screw or spiral

American Machinery Corp.
Atlas-Pacific Engineering Co.
Benner-Nawman, Inc.
Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Buschman Co., E. W.
Christian Engineers, J. D.
Corrigan Co., Inc., J. C.
Greer Co., J. W.
Jeffrey Mfg. Co.
Link-Belt Co.
Mathews Conveyor Co.
Renneburg & Sons, Co., Edward
Sprout Waldron Co., Inc.
Sturtevant Mill Co.

Conveyors and elevators — vibrating

Allen Fruit Co., Inc., Machinery Div.
Atlas-Pacific Engineering Co.
Chain Belt Co.
Chisholm-Ryder Co., Inc.
Christian Engineers, J. D.
Cleveland Vibrator Co.
Corrigan Co., Inc., J. C.
Ferrell and Co., A. T.
Hamachek Machine Co., Frank
Key Equipment Co.
Link-Belt Co.
Robins and Co., Inc., A. K.
Scott Viner Co.
Simplicity Engineering Co.
Stephens-Adamson Mfg. Co.
Syntron Co.

Drives—chain, belt

Atlas-Pacific Engineering Co.
Biner Ellison Machinery Co.
Chain Belt Co.
Christian Engineers, J. D.
Diamond Chain Co., Inc.
Dodge Mfg. Corp.
Hamachek Machine Co., Frank
Jeffrey Mfg. Co.
Link-Belt Co.
Morse Chain Co.
Pease Co., F. B.

Drives—fluid and clutch

American Standard Industrial Div.
Dodge Mfg. Corp.
Link-Belt Co.
Pease Co., F. B.

Drives—gear

Biner Ellison Machinery Co.
Christian Engineers, J. D.
Creamery Package Mfg. Co.
Dodge Mfg. Corp.
Falk Corp.
Link-Belt Co.
Pease Co., F. B.
Stevens-Adamson Mfg. Co.
U.S. Electrical Motors
Von Opel Corp., Georg
Western Gear Corp.

Drives—variable speed

American Standard Industrial Div.
Biner Ellison Machinery Co.
Creamery Package Mfg. Co.
Dodge Mfg. Corp.
Falk Corp.
Foote Bros. Gear & Machine Corp.
Fulton Asphalt Co.
Link-Belt Co.
Morse Chain Co.
Pease Co., F. B.
Reeves Pulley Co. Div., Reliance Electric and Engineering Co.
U.S. Electrical Motors
Western Gear Corp.

Dumpers—boxes, drums, bins

Benner-Nawman, Inc.
Christian Engineers, J. D.
Commerical Mfg. & Supply Co.
Dudley Machinery Corp.
Essex Conveyors, Inc.
Link Belt Co.
Scott Viner Co.
Specialty Machinery Corp.
Stevens-Adamson Mfg. Co.
Terriss-Consolidated Industries
Thermovac Inc.
Tote Systems, Inc.
Veg-a-Peel Co., Inc.
West Bend Equipment Corp.

Elevators—containers

Albertoli, John
Barrett-Cravens Co.
Benner-Nawman, Inc.
Link-Belt Co.
Lynch Corp.
National Five-Point, Inc.
Peco Corp.
Standard Conveyor Co.

Elevators—product

Albright Co., Thomas
Atlas-Pacific Engineering Co.
Barrett-Cravens Co.
Benner-Nawman, Inc.
Christian Engineers, J. D.
Dudley Machinery Corp.
Jefferey Mfg. Co.
Link-Belt Co.
Scott Viner Co
Sturtevant Mill Co.

Feeders

Allen Fruit Co., Inc.
B-I-F Industries, Inc.
Benner-Nawman, Inc.
Chain Belt Co.
Christian Engineers, J. D.
Cleveland Vibrator Co.
Commercial Mfg. & Supply Co.
Dacam Corp.
Filper Corporation
Jeffrey Mfg. Co.
Key Equipment Co.
Link-Belt Co.
Machinery Service Co., Inc.
Magnuson Engineers, Inc.
Pease Co., F. B.
Renneburg & Sons, Co., Edward
Richardson Scale Co.

What's the Address? Turn to alphabetical listings beginning on Page 53.

Scott Viner Co.
Simplicity Engineering Co.
Southwestern Engineering Co.
Sprout Waldron Co., Inc.
Stephens-Adamson Mfg. Co.
Syntron Co.
United Co., The
Wallace and Tiernan, Inc.
Woodman Co., Inc.

Fittings, pipe, tubing

Barnstead Still and Sterilizer Co.
Cherry-Burrell Corp.
Corning Glass Works
Creamery Package Mfg. Co.
Fluidizer Div.
G and H Products Corp.
Goodrich Industrial Products Co., B. F.
Owens-Illinois Glass Co.
Ladish Co., Tri-Clover Div.
Pick Mfg. Co.
Scott Viner Co.
Terriss-Consolidated Industries
Tube Turns Plastics, Inc.
U.S. Stoneware Co., Plastics & Synthetics Div.

Hoppers

Brewers & Bottlers Equipment Corp.
Bridge Machine Co.
Corrigan Co., Inc., J. C.
Dudley Machinery Corp.
Ferrell and Co., A. T.
Key Equipment Co.
Krenz Inc., Oscar
Link-Belt Co.
Pease Co., F. B.
Richardson Scale Co.
Tote Systems, Inc.

Hose—water, steam, air, etc.

Brookfield Engineering Lab., Inc.
Cherry-Burrell Corp.
Creamery Package Mfg. Co.
Goodrich Industrial Products Co., B. F.
Gray Co.
Metal-Glass Products Co.
Robins and Co., Inc., A. K.
Stewart-Warner Corp.
Thermoid Div., H. K. Porter Co., Inc.
U. S. Rubber Co.

Lift trucks, powered

Allis-Chalmers Manufacturing Co.
Baker Industrial Trucks Div., Otis Elevator Company
Barrett-Cravens Co.
Clark Equipment Co.
Hyster Co.
Knickerbocker Co.
Kromer Co., O. W.
Lewis-Sheppard Products, Inc.
Lift Trucks, Inc.
Moto-Truc Co.
Towmotor Corporation
Yale & Towne Mfg. Co., Automatic Transporation Company Div.

Motors, electric

Brook Motor Corp.
Fairbanks, Morse & Co.
Hamachek Machine Co., Frank
Reliance Electric & Engineering Co.
Robbins & Myers, Inc.
U.S. Electrical Motors
Westinghouse Electric Corp.

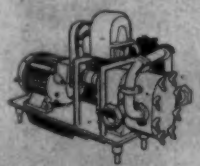
Pallets, pallet bins

American Box Corp.
Container & Timber Prod. Corp.
General Box Co.

BATCH or CONTINUOUS – ACCURACY + OR – 1/4 of 1%

Whether you pump a light liquid or an extremely viscous product, the Waukesha MFC will automatically measure *and transfer* with an accuracy of + or – ¼ of 1% at capacities to 100 G. P. M. This high degree of precision automates processing lines where accurate batch measurement or a continuous measured flow control is required. Perpetual inventory control. System may be manual or fully automatic including electronic controls.

Let a Waukesha engineer explain how the MFC can automate your product stream. Phone or write.



WAUKESHA FOUNDRY COMPANY

PUMP DIVISION

WAUKESHA FOUNDRY COMPANY, DEPT. 89E, WAUKESHA, WISCONSIN

District Sales Offices: New York, Atlanta, San Francisco.
Distributors in major cities of U. S. A. and Canada.
Export Sales: FMC International, San Jose 8, California.

For mayonnaise and salad dressing applications contact EMULSOL EQUIPMENT, INC., CHICAGO, ILLINOIS

Goodyear Air Craft Corp.
Magline, Inc.
Pacific Wine Works Co.
Republic Steel Corp.

Pumps

Anderson Bros. Mfg. Co.
B-I-F Industries, Inc.
Chain Belt Co.
Champion-Pneumatic Machinery Co.
Cherry-Burrell Corp.
Chicago Stainless Equipment Corp.
Clayton Mfg. Co.
Creamery Package Mfg. Co.
Dunham-Bush, Inc.
FMC Corp.
Fairbanks, Morse & Co.
Fernholtz Machinery Co.
G and H Products Corp.
Gardner-Denver Co.
Gray Co.
Hanson Equipment Co.
Hardie Mfg. Co., Inc.
Key Equipment Co.
Kromer Co., O. W.
Ladish Co., Tri-Clover Div.
Manton Gaulin Mfg. Co.
Metal-Glass Products Co.
Robbins & Myers, Inc.
Roy Co., Milton
Scott Viner Co.
Sinclair-Scott
Stewart-Warner Corp.
Terriss—Consolidated Industries
Thermovac Inc.
U.S. Steel Corp.
Viking Pump Co.
Wallace & Tiernan, Inc.
Waukesha Foundry Co., Pump Div.
Yeomans Bros. Co.

Racks — dehydrating, freezing, storage

Barrett-Cravens Co.
Bridge Machine Co.
Gardner Mfg. Co.
Goodrich Industrial Products Co., B. F.
Key Equipment Co.
Palmer-Shile Co.
Rapids-Standard Co.
Tranter Mfg. Co., Inc.

Trailers and highway trucks

Butler Mfg. Co.
Ford Motor Co.
Magline, Inc.

Valves

Bristol Co.
Cherry-Burrell Corp.
Crane Co.
Creamery Package Mfg. Co.
Frick Co.
G and H Products Corp.
Goodrich Industrial Products Co., B. F.
Gray Co.
Jeffrey Mfg. Co.
Jenkins Bros., Inc.
Ladish Co., Tri-Clover Div.
Minneapolis-Honeywell Regulator Co.
Powell Co., William
Roy Co., Milton
Scott Viner Co.
Terriss—Consolidated Industries
Tube Turns Plastics, Inc.
U. S. Rubber Co.

SECTION F

Packaging Equipment, Containers and Supplies

Adhesives, glues

Adhesive Products, Inc.
Arabol Mfg. Co.
Armour Alliance Industries
Armstrong Cork Co.
Atwood Adhesives, Inc.
Dow Corning Corp.
Du Pont de Nemours & Co., E. I.
Electric Auto-Lite Co.
Findley Co., F. G.
Fuller Co., H. B.
Goodrich Industrial Products Co., B. F.
Ludlow Corp.
Minnesota Mining and Mfg. Co.
Morningstar-Paisley, Inc.
National Starch and Chemical Corp.
Permacel
Polymer Industries, Inc.
Swift & Co.
Union Paste Co.

Aerosol propellants

Air Reduction Div., Ohio Chemical & Surgical Equipment Co., Inc.
Du Pont de Nemours & Co., E. I.

Bag forming, filling, sealing machines

Bartelt Engineering Co.
Bemis Bros. Bag Co.
Bridge Machine Co.
Brown Filling Machine Co.
Burt Co., F. L.
Consolidated Packaging Mach. Corp.
Dacam Corp.
Duncan Equipment Co.
FMC Corp.
Food Equipment and Supply Co.
General Packaging Equipment Co.
Hayssen Mfg. Co.
Kartridge Pak Co.
King Sales and Engineering Co.
Lynch Corp.
Marathon Corp.
Minnesota Mining and Mfg. Co.
National Equipment Corp.
Package Machinery Co.
Richardson Scale Co.
Schjeldahl Co.
Stokes Corp., F. J.
Triangle Package Machry. Co.
Union Standard Equipment Co.
Wallace & Tiernan, Inc.
Weber Co., Inc., H. G.
Woodman Co., Inc.

Bags and pouches, printed film, foil, etc.

Bemis Bros. Bag Co.
Brown Filling Machine Co.
Central States Paper & Bag Co.
Chicago Transparent Bag Co.
Continental Can Co.
Cromwell Paper Co.
Crown Zellerbach Corp.
Dixie Wax Paper Co.
Dobeckmun Co. Div., Dow Chemical Co.
Dow Chemical Co.
Kartridg Pak Co.
Kennedy Car Liner Bag Co., Inc.
Kordite Co.
Marathon, Div. American Can Co.
Milprint, Inc.
Owens-Illinois Glass Co.
Pacific Coast Foil Co.
Pollock Paper Co.
Reynolds Metals Co.
Riegel Paper Corporation

Banding machines

Acme Steel Co.
Economic Machinery Co.
Gisholt Machine Co.
Littell Machine Co., F. J.
Minnesota Mining and Mfg. Co.
Union Standard Equipment Co.
U.S. Steel Corp.

Boxes and cartons, miscellaneous

American Box Co.
Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Crown Zellerbach Corp.
Fibreboard Paper Products Corp.
Gaylord Container Corp., Div., Crown Zellerbach Corp.
General Box Co.
Groen Mfg. Co.
Hinde and Dauch, Div., West Virginia Pulp and Paper
Hoerner Boxes, Inc.
Lewis, G. B.
Lily-Tulip Cup Corp.
Marathon, Div. American Can Co.
Old Dominion Box Co.
Owens-Illinois Glass Co.
Owens-Illinois Paper Products Div.
Packaging Corp. of America
Plastomatic Corp.
Pollock Paper Co.
Riegel Paper Corp.
Schmidt Litho Co.
Schoettle Co., Inc., Edwin J.
Sefton Fibre Can Div.
Stecher-Traung Litho Corp.
Stone Container Corp.
Waldorf Paper Products Co.
West Virginia Pulp & Paper Co.
Weyerhaeuser Co., Boxboard Folding Carton Div.

Can closing and sealing machines

American Can Co.
Ams Machine Co., Max
Angelus Sanitary Can Machine Co.
Brewers & Bottlers Equipment Corp.
Callahan Can Machine Co.
Continental Can Co.
Eyrle Company
Groen Mfg. Co.
Kartridg Pak Co.
National Can Corp.
Resina Auto Machry. Co.
Union Standard Equipment Co.

Can lines, conveyors—controls

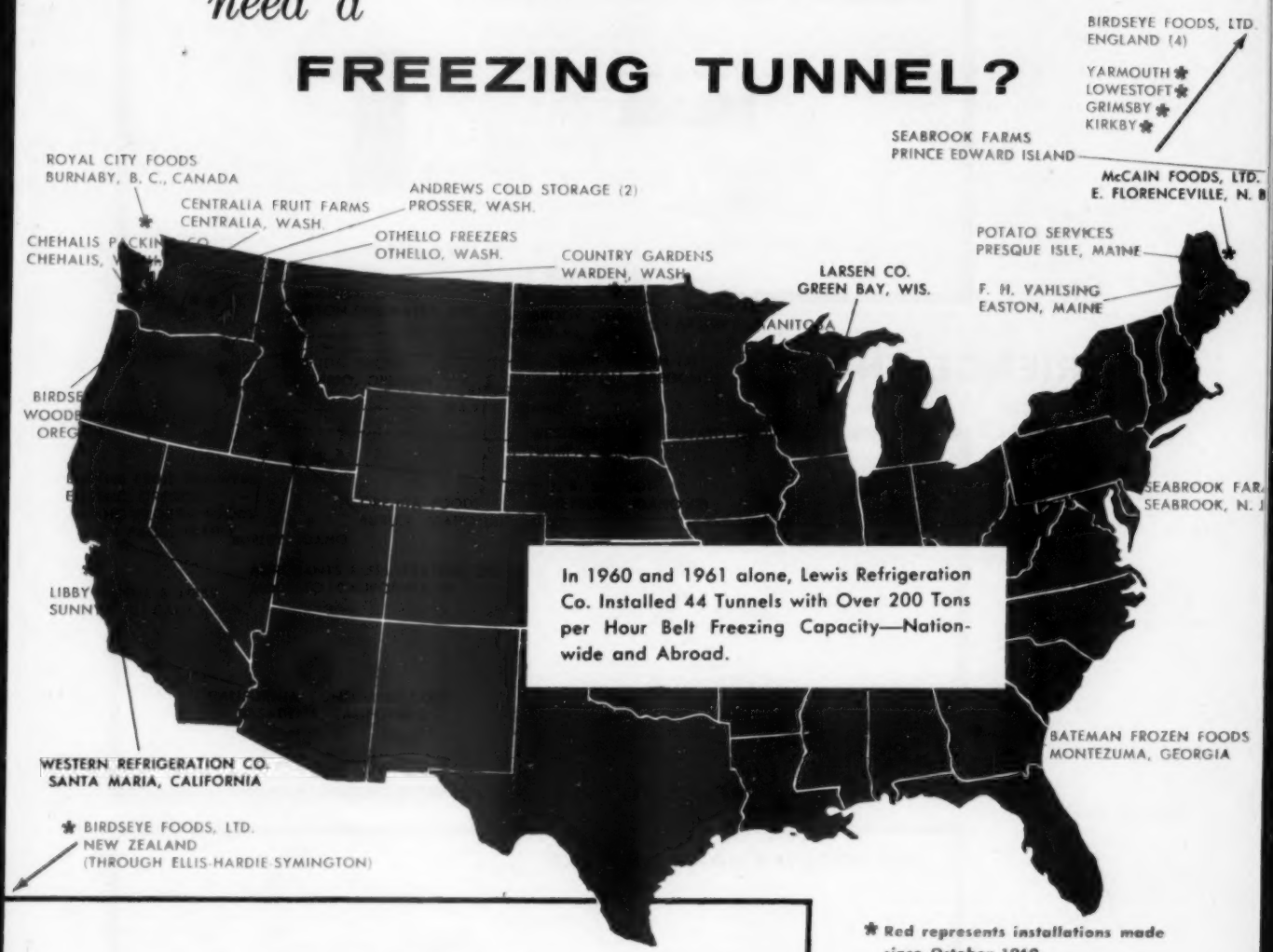
Ace Specialty Mfg. Co.
Peco Corp.
Rochester Ropes, Inc.
Safe Pack Container Co.

Can making machines

Ams Machine Co., Max
Angelus Sanitary Can Machine Co.
Baldwin Lima Hamilton Corporation

need a

FREEZING TUNNEL?



In 1960 and 1961 alone, Lewis Refrigeration Co. Installed 44 Tunnels with Over 200 Tons per Hour Belt Freezing Capacity—Nationwide and Abroad.

* Red represents installations made since October 1960

specialists in **BELT FREEZERS**

for

Peas
Potatoes
Lima Beans
Carrots
Corn

Loose product belt tunnels

Contact plate freezers

Bulk and package freezers

Refrigerated warehouses

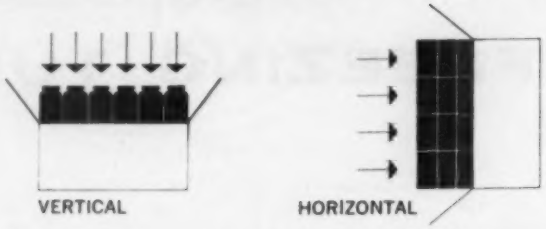
Design and construction

contact

LEWIS

LEWIS REFRIGERATION CO.

STANDARD-KNAPP CASE LOADERS



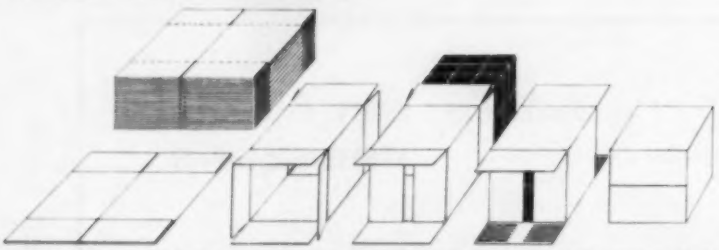
Horizontal and vertical loading — cans, bottles, jars, bags, cartons.

EXPERIENCE-ENGINEERED PACKAGING EQUIPMENT

STANDARD-KNAPP CASE SEALERS

Gluers with horizontal or vertical compression units.
Self-adjusting types. Automatic tape sealing units.

STANDARD-KNAPP INTEGER



STANDARD-KNAPP LINE Case openers — packers — gluers and sealers
Unscramblers — collectors — boosters — labelers
Forming equipment for plastics packaging

PUT YOUR PACKAGING PROJECT TO EMHART FOR EXPERIENCE ENGINEERING

EMHART MANUFACTURING COMPANY / PORTLAND DIVISION / PORTLAND, CONNECTICUT

EMHART

Equipment/Supplies Index

SECTION F
Packaging Equipment, Containers and Supplies

Bliss Co., E. W.
Borden Co.
Callahan Can Machine Co.
Crown Cork & Seal Co., Inc.
Durant Mfg. Co.
Heekin Can Co.
Island Equipment
Littell Machine Co., E. J.
Safe Pack Container Co.
United Can Div., Hunt Foods Industries
Waterbury Farrell Foundry & Machine Co.

Can unscramblers, dumpers, unloaders

ABC Packing Machine Corp.
Albertoli, John
American Can Co.
Atkron, Inc.
Barker Co.
Buschman Co., E. W.
Busse Bros.
Chisholm-Ryder Co., Inc.
Continental Can Co.
Cuyler Corp., Otto W.
Dunkley Co.
Economic Machinery Co.
Emhart Mfg. Co.
Island Equipment Corp.
Kartridg Pak Co.
Key Equipment Co.
MRM Co.
Robins and Co., Inc., A. K.
Shuttleworth Inc.
United Can Div., Hunt Foods Industries
Weigh Right Auto. Scale Co.

Cans, conventional — tin/steel, aluminum

American Can Co.
Borden Co.
Carnation Co., Can Div.
Central Can Co.
R. C. Can Co.
Stern Can Co.
United Can Div., Hunt Foods Industries
Western Can Co.

Cans, lithographed

American Can Co.
Crown Cork & Seal Co., Inc.
Continental Can Co.
Heekin Can Co.
National Can Corp.
Stern Can Co.
United Can Div., Hunt Foods Industries

Carton forming, closing machines

Bartelt Engineering Co.
Container Corp. of America
Crompton & Knowles Packaging Corp.
Dacam Corp.
Diagraph-Bradley Ind., Inc.
Diamond National Corp.
Emhart Mfg. Co.
FMC Corporation
Jones & Co., Inc., R. A.
Kaiser Aluminun & Chemical Corp.
Lynch Corp.
Central States Can Corp.
Continental Can Co.
Crown Cork & Seal Co., Inc.
Heekin Can Co.
Marathon, Div. American Can Co.
National Can Corp.
National Equipment Corp.
New Jersey Machine Corp.
Old Dominion Box Co.
Package Mchry. Co.
Pneumatic Scale Corp.
Post Machinery Co.
Triangle Package Machine Co.
Union Standard Equipment Co.
Waldorf Paper Products Co.
Weigh Right Automatic Scale Co.
Western Gear Corp.
Weyerhaeuser Co., Boxboard & Folding Carton Div.

Cartons, folding

Allen Cartons, Inc.
Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Crocker Co., H. S.
Cromwell Paper Co.
Crown Zellerbach Corp.
Diamond National Corp.
Federal Paper Board Co., Inc.
Fibreboard Paper Products Corp.
Flintkote Co.
KVP Sutherland Paper Co.
International Paper Corp.
Marathon, Div. American Can Co.
Mead Packaging Div. of Mead Corp.
Milprint, Inc.
Muirson Label Company
Old Dominion Box Co., Inc.
Owens-Illinois Glass Co.
Pacific Coast Foil Co.
Packaging Corp. of America
Pollock Paper Co.
Pneumatic Scale Corp.
Riegel Paper Corp.
Rossotti Lithograph Corp.
Schmidt Litho Co.
Schoettle Co., Inc., Edwin J.
Sealright Co.
Stecher-Traung Litho Corp.
Stone Container Corp.
U. S. Industrial Chem. Co.
U.S. Printing and Litho Adv. and Mkt. Service
Waldorf Paper Products Co.
West Virginia Pulp & Paper Co.
Weyerhaeuser Co., Boxboard & Folding Carton Div.

Cartons, laminated

Allen Cartons, Inc.
Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Crown Zellerbach Corp.
Federal Paper Board Co., Inc.
Fibreboard Paper Products Corp.
KVP Sutherland Paper Co.
Marathon, Div. American Can Co.
Mead Packaging Div. of Mead Corp.
Milprint, Inc.
Muirson Label Company
Old Dominion Box Co., Inc.
Pacific Coast Foil Co.
Packaging Corp. of America
Rossotti Lithograph Corp.
Schoettle Co., Inc., Edwin J.
Stone Container Corp.
U.S. Printing and Litho Adv. and Mkt. Service
Waldorf Paper Products Co.
Weyerhaeuser Co., Boxboard & Folding Carton Div.

Cartons, waxed

Allen Cartons, Inc.
American Can Co.
Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Crown Zellerbach Corp.
Diamond National Corp.
Federal Paper Board Co., Inc.
Fibreboard Paper Products Corp.
Flintkote Co.
Groen Mfg. Co.
Hoerner Boxes, Inc.
KVP Sutherland Paper Co.
Lily-Tulip Cup Corp.
Marathon, Div. American Can Co.
Mead Packaging Div. of Mead Corp.
Milprint, Inc.
Muirson Label Company
Owens-Illinois Paper Products Div.
Packaging Corp. of America
Pollock Paper Co.
Riegel Paper Corp.
Rossotti Lithograph Corp.
Schmidt Litho Co.
Schoettle Co., Inc., Edwin J.
Stone Container Corp.
U.S. Printing and Litho Adv. and Mkt. Service
Waldorf Paper Products Co.
West Virginia Pulp & Paper Co.
Weyerhaeuser Co., Boxboard & Folding Carton Div.

Cases, shipping

American Box Corp.
Boise Cascade Container Corp.
Cascade Container Corp.
Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Cromwell Paper Co.
Federal Paper Board Co., Inc.
Fibreboard Paper Products Corp.
Flintkote Co.
Gaylord Container Corp., Div., Crown Zellerbach Corp.
General Box Co.
Hinde and Dauch, Div., West Virginia Pulp and Paper
Hoerner Boxes, Inc.
Inland Container Corp.
International Paper Corp.
Maxwell Bros. Inc.
Old Dominion Box Co., Inc.
Owens-Illinois Glass Co.
Owens-Illinois Paper Products Div.
Packaging Corp. of America
Stone Container Corp.
Union Bag—Camp Paper Corp.
Waldorf Paper Products Co.
West Virginia Pulp & Paper Co.
Weyerhaeuser Co., Boxboard & Folding Carton Div.

Case packers

ABC Packing Machine Corp.
Atkron, Inc.
Brewers & Bottlers Equipment Corp.
Burt Machine Co.
Chisholm-Ryder Co. of Penna.
Container Corp. of America
Crompton & Knowles Packaging Corp.
Cuyler Corp., Otto W.
Dacam Corp.
Economic Machinery Co.
Emhart Mfg. Co.
FMC Corporation
Jones & Co., Inc., R. A.

What's the Address? Turn to alphabetical listings beginning on Page 53.

Equipment/Supplies Index

SECTION F
Packaging Equipment Containers and Supplies

Lathrop Paulson Co.
Old Dominion Box Co., Inc.
Schroeder Machine Corp.
Shuttleworth Inc.
Union Standard Equipment Co.
Waldorf Paper Products Co.
Weber Co., Inc., H. G.

Case printers

Algene Marking Equipment Co.
Bell-Mark Corp.
Bostick-Inc.
Chisholm-Ryder of Penna.
Cuyler Corp., Otto W.
Diagraph-Bradley Ind., Inc.
Elliott Mfg. Co., Inc.
Emhart Mfg. Co.
Gottscho, Adolph, Inc.
Industrial Marking Equipment Co.
Kiwi Coders Corp.
Markem Machine Co.

Case sealers

ABC Packing Machine Corp.
Brewers & Bottlers Equipment Corp.
Chisholm-Ryder Co. of Penna.
Crompton & Knowles Packaging Corp.
Cuyler Corp., Otto W.
Dacam Corp.
Elliott Mfg. Co., Inc.
FMC Corporation
General Corrugated Machy. Co.
National Equipment Corp.
Schroeder Machine Corp.
Union Standard Equipment Co.
Waldorf Paper Products Co.
Weber Co., Inc., H. G.

Case stitchers

Acme Steel Co.
Diagraph-Bradley Ind., Inc.

Cellulose bands

American Viscose Corp.
Armstrong Cork Co.
Dennison Mfg. Co.
Du Pont de Nemours & Co., E. I.
Thatcher Glass Mfg. Co., Inc.

Cleaning machines—glass or tin

Biner Ellison Machinery Co.
Chisholm-Ryder Co., Inc.
Eyrle Co.
Kiefer Machine Co.
MRM Co.
Machinery Service Co., Inc.
Magnusen Engineers, Inc.
Pneumatic Scale Corp.
U.S. Bottlers Mchry. Co.
White Cap Co.

Closure liners

Armstrong Cork Co.
Crown Cork & Seal Co., Inc.
Dewey & Almy Chemical Div., W. R. Grace & Co.
Ludlow Corp.
Milprint, Inc.
Owens-Illinois Glass Co.
Pacific Coast Foil Co.

Closures—crown

Armstrong Cork Co.
Bridge Machine Co.
Continental Can Co.
Crown Cork & Seal Co.

Closures—lug or screw

Aluminum Co. of America
Anchor Hocking Glass Corporation
Armstrong Cork Co.
Ball Brothers Co.
Bernardin Bottle Cap Co.
Biner Ellison Machinery Co.
Continental Can Co.
Crown Cork & Seal Co., Inc.
Northwestern Glass Co.
Owens-Illinois Glass Co.
Phoenix Metal Cap Co.
White Cap Co.

Closures—molded plastic

Anchor Hocking Glass Corp.
Armstrong Cork Co.
Bernardin Bottle Cap Co.
Biner Ellison Machinery Co.
Brockway Glass Co., Inc.
Brown Filling Machine Co.
Heekin Can Co.
Owens-Illinois Glass Co.
Phoenix Metal Cap Co.
Thatcher Glass Mfg. Co., Inc.

Closures—vacuum

Aluminum Co. of America
Anchor Hocking Glass Corp.
Bernardin Bottle Cap Co.
Crown Cork & Seal Co.
Owens-Illinois Glass Co.
White Cap Co.

Code dating equipment

Bell-Mark Corp.
Brewers & Bottlers Equipment Corp.
Crompton & Knowles Packaging Corp.
Gottscho, Inc., Adolph
Griffin-Rutgers, Inc.
Industrial Marking Equipment Co.
Kiwi Coders Corp.
Markem Machine Co.
Matthews & Co., J. H.
Old Dominion Box Co., Inc.
Shubert Co., H. A.
White Cap Co.

Containers—miscellaneous

Bradley-Sun Div.
Wheeling Stamping Co.

Counters—can, bottle

Durant Mfg. Co.
Genisco, Inc.
Magnuson Engineers, Inc.
Peco Corp.
Veeder Root Co.

Drums, fibre

Continental Can Co.
Diamond National Corp.
Rheem Mfg. Co.

Drums, metal

Continental Can Co.
Republic Steel Corp.
Rheem Mfg. Co.
Terriss—Consolidated Industries
U.S. Steel Corp.

Films, packaging

American Viscose Corp.
Celanese Corp. of America
Central States Paper & Bag Co.
Chicago Transparent Bag Co.
Continental Can Co.
Crown Zellerbach Corp.
Dixie Wax Paper Co.
Dobeckmun Co. Div.
Dow Chemical Co.
Du Pont de Nemours & Co., E. I.
Eastman Chemical Products, Inc.
Goodyear Tire & Rubber Co.
Kordite Co.
Ludlow Corp.
Marathon Corp.
Milprint, Inc.
Minnesota Mining and Mfg. Co.
Pollock Paper Co.
Reynolds Metals Co.
Riegel Paper Corp.
Spencer Chemical Co.
Visking Co., Div. of Union Carbide Corp.

Foil crimping and closing machines

Kaiser Aluminum & Chemical Corp.
Reynolds Metals Co.
Scandia Packaging Machinery Co.

Foil labels, wraps, etc.

Chicago Transparent Bag Co.
Continental Can Co.
Crocker Co., H. S.
Crown Zellerbach Corp.
Dennison Mfg. Co.
Dobeckmun Co. Div.
Ekco-Alcoa Containers, Inc.
Gamse Litho Co.
Ludlow Corp.
Lustour Corp.
Marathon Corp.
Milprint, Inc.
Muirson Label Company
Pacific Coast Foil Co.
Pollock Paper Co.
Reynolds Metals Co.
Riegel Paper Corp.
Schmidt Litho Co.
Strawberry Hill Press, Inc.
U. S. Printing & Litho

Foil containers, rigid

Aluminum Co. of America
Anaconda Aluminum Co.
Chicago Metallic Mfg. Co.
Ekco-Alcoa Containers, Inc.
Kaiser Alum. & Chem. Corp.
Mirro Aluminum Co.
Old Dominion Box Co., Inc.
Reynolds Metals Co.

Glass closing and sealing machines

Aluminum Co. of America
Anchor Hocking Glass Corp.
Armstrong Cork Co.
Chisholm-Ryder of Penna.
Consolidated Packaging Machinery Corp.
Crown Cork & Seal Co.
Eyrle Company
Pneumatic Scale Corp.
Resina Auto Machry. Co.
White Cap Co.

Glass unscramblers, dumpers, unloaders

ABC Packing Machine Corp.
Atkron, Inc.
Filler Machine Co.
Horix Manufacturing Co.

What's the Address? Turn to alphabetical listings beginning on Page 53.

Island Equipment Corp.
MRM Co.
Pneumatic Scale Corp.
Weigh Right Auto. Scale Co.
White Cap Co.

Glass containers

American Wheaton Glass Corp.
Anchor Hocking Glass Corp.
Armstrong Cork Co.
Ball Brothers Co.
Bridge Machine Co.
Brockway Glass Co., Inc.
Continental Can Co.
Fairmont Glass Works, Inc.
Foster Forbes Glass Co.
Glass Containers Corp.
Glenshaw Glass Co.
Kerr & Co., Alex. H.
Knox Glass Co.
Latchford Glass Co.
Metro Glass Div.
Northwestern Glass Co.
Owens-Illinois Glass Co.
Pierce Glass Co.
Thatcher Glass Mfg. Co., Inc.
Tygart Valley Glass Co.

Heat sealers, film, foil, etc.

Bemis Bros. Bag Co.
Brown Filling Machine Co.
Chicago Transparent Bag Co.
Dacam Corp.
Dennison Mfg. Co.
Palmer Co., Harold L.
Schjeldahl Co.

Labelers, can

Allen Machinery & Equipment Co.
Biner Ellison Machinery Co.
Burt Machine Co.
Chisholm-Ryder Co. of Pa.
Crompton & Knowles Packaging Corp.
Cuyler Corp., Otto W.
Diagraph-Bradley Ind., Inc.
Emhart Mfg. Co.
MRM Co.
Potdevin Machine Co.
Union Standard Equipment Co.

Labelers, glass

Allen Machinery and Equipment Co.
Barry-Wehmiller Machinery Co.
Biner-Ellison Machinery Co.
Brewers & Bottlers Equipment Corp.
Burt Machine Co.
Chisholm-Ryder Co. of Penna.
Crompton & Knowles Packaging Corp.
Diagraph-Bradley Ind., Inc.
Economic Machinery Co.
Elliott Mfg. Co., Inc.
Emhart Mfg. Co.
Gesholt Machine Co.
MRM Co.
New Jersey Machine Corp.
Pneumatic Scale Corp.
Potdevin Machine Co.

Labels, can and glass

Brady Co., W. H.
Carlisle and Co., A.
Continental Can Co.
Crocker Co., Inc., H. S.
Dennison Mfg. Co.
Eureka Specialty Printing Co.
Gamse Litho Co.
Lord Baltimore Press
Lustour Corp.
Michigan Lithographing Co.
Milprint, Inc.
Muirson Label Company, Inc.
Pacific Coast Foil Co.

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WARSCO DIVISION

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SECTION F
Packaging Equipment, Containers and Supplies

Piedmont Label Co.
Price Bros. Litho. Co.
Robins & Co., Inc., A. K.
Rochester Lithographic Mfg. Co.
Roesch Co., Louis
Rossotti Lithograph Corp.
Schmidt Litho Co.
Security Lithograph Co., Label Div.
Stecher-Traung Litho Corp.
Steigerwald Co., A. M.
Strawberry Hill Press, Inc.
U.S. Printing and Litho Adv. and Mkt. Service
West Virginia Pulp & Paper Co.
Western Litho Co.

Marking equipment

Algene Marking Equipment Co.
Barkley & Dexter Labs, Inc.
Barry-Wehmiller Machinery Co.
Bell-Mark Corp.
Brady Co., W. H.
Crompton & Knowles Packaging Corp.
Dacam Corp.
Diagraph-Bradley Ind., Inc.
Gottscho Inc., Adolph
Griffin-Rutgers, Inc.
Kiwi Coders Corp.
Industrial Marking Equipment Co.
Markem Machine Co.
Marsh Stencil Machine Co.
Matthews & Co., J. H.
Shubert Co., H. A.

Multiple packs

Container Corp. of America
Continental Can Co.
Cornell Paperboard Products Co.
Diamond National Corp.
Ferguson Co., J. L.
Fibreboard Paper Products Corp.
Lynch Corp.
Mead Packaging, a Div. of Mead Corp.
Muirson Label Company
Old Dominion Box Co., Inc.
Owens-Illinois Paper Products Div.
Rossotti Lithograph Corp.
Union Standard Equipment Co.
U.S. Printing and Litho Adv. and Mkt. Service
Waldorf Paper Products Co.

Overwraps, carton and box

American Viscose Corp.
Battle Creek Packaging Machines, Inc.
Continental Can Co.
Crocker Co., Inc., H. S.
Cromwell Paper Co.
Crown Zellerbach Corp.
Dixie Wax Paper Co.
Dobeckmun Co. Div.
Dow Chemical Co.
Gamse Litho Co.
International Paper Corp.
KVP Sutherland Paper Co.
Ludlow Corp.
Lustour Corp.
Marathon Div., American Can Co.
Milprint, Inc.
Muirson Label Company, Inc.
Owens-Illinois Paper Products Div.
Pacific Coast Foil Co.
Pollock Paper Co.
Reynolds Metals Co.
Riegel Paper Corp.
Rochester Lithographic Mfg. Co.
Rossotti Lithograph Corp.
Schmidt Litho Co.
Signode Steel Strapping Co.
Standard Packaging Corp.
Union Standard Equipment Co.
U.S. Printing and Litho Adv. and Mkt. Service
West Virginia Pulp & Paper Co.
Western Litho. Co.

Palletizers, depalletizers

Alvey Conveyor Mfg. Co.
American Can Co.
Barry-Wehmiller Machinery Co.
Benner-Nawman, Inc.
Brewers & Bottlers Equipment Corp.
Busse Bros.
Carrie Machinery Co.
Continental Can Co.
Crown Cork & Seal Co., Inc.
FMC Corporation
Key Equipment Co.
Lamson Corp.
Lathrop Paulson Co.
Mathews Conveyor Co.
National Can Corporation
Rietz Mfg. Co.

Scales, automatic weighing

Bartelt Engineering Co.
Bemis Bros. Bag Co.
Champion Paper and Fibre Co.
Consolidated Packaging Machinery Corp.
Eagle Machinery Co., Ltd.
Exact Weight Scale Co.
Fairbanks, Morse & Co.
FMC Corporation
Hayssen Mfg. Co.
Howe Scale Co.
Illumitronic Engineering
Lynch Corp.
Pacific Packtron
Pennsylvania Scale Co.
Pneumatic Scale Corp.
Richardson Scale Co.
Toledo Scale Co.
Union Standard Equipment Co.
Wallace and Tiernan, Inc.
Weigh Right Auto. Scale Co.
Woodman Co., Inc.

Stitching, strapping and stapling, equipment and supplies

Acme Steel Co.
American Viscose Corp.
Container Stapling Corp.
Diagraph-Bradley Ind., Inc.
Signode Steel Strapping Co.
U.S. Steel Corp.
Woodman Co., Inc.

Tape, tape dispensers

Adhesive Products, Inc.
Bemis Bros. Bag Co.
Brady Co., W. H.
Central State Paper & Bag Co.
Diagraph-Bradley Ind., Inc.
Lathrop Paulson Co.
Ludlow Corp.
Marsh Stencil Machine Co.
Minnesota Mining and Mfg. Co.
Nashua Corp.
Permacel

Tin plate

Bethlehem Steel Co.
Granite City Steel Co.
Inland Steel Co.
Jones & Laughlin Steel Corp.
Kaiser Steel Corp.
National Steel Corp.
Weirton Steel Co., Div. National Steel Corp.
Wheeling Steel Corp.
Youngstown Sheet and Tube Co.

Wrapping machines

Anderson Bros. Mfg. Co.
Battle Creek Packaging Machines, Inc.
Crompton & Knowles Packaging Corp.
Dacam Corp.
Elgin Mfg. Co.
Emhart Mfg. Co.
FMC Corporation
Hayssen Mfg. Co.
Lynch Corp.
National Equipment Corp.
Oliver Machinery Co.
Package Machinery Co.
Signode Steel Strapping Co.
Union Standard Equip. Co.

SECTION G
Control and Laboratory Equipment, Instruments, Supplies

Autoclaves

Dennison Mfg. Co.
Dundon Iron Works
Groen Mfg. Co.
Krenz Inc., Oscar
Pfaudler Permutit Inc.
Precision Scientific Co.
Robins and Co., Inc., A. K.
Wilkens-Anderson Co.
Wilmot Castle Co.

Can testing equipment

Ams Machine Co., Max
Bliss Co., E. W.
Borden Co.
Taylor Instrument Co.
Wilkens-Anderson Co.

Color instruments

Agtron Co.
Barkley & Dexter Labs, Inc.
Bausch & Lomb Optical Co.
Beckman Instruments, Inc.
Macbeth Corp.
Magnuson Engineers
Roy Co., Milton
Wilkens-Anderson Co.

Consistency instruments

Brabender Instruments, Inc., C. W.
FMC Corp.
Fischer & Porter Co.
L.E.E. Inc.
Taylor Instrument Companies
United Co., The

Distilling apparatus
Barnstead Still and Sterilizer Co.
Groen Mfg. Co.
Krenz Inc., Oscar
Pfaudler Permutit Inc.
Precision Scientific Co.
Stokes Corp., F. J.
Wilkens-Anderson Co.

Filters, laboratory
Corning Glass Works

Glassware, laboratory
Armstrong Cork Co.
Brockway Glass Co., Inc.
Chicago Apparatus Co.
Corning Glass Works
Fischer & Porter Co.
Owens-Illinois Glass Co.
Terriss—Consolidated Industries
Wilkens-Anderson Co.

Headspace, container-fill gauges Hydrometers
Electric Auto-Lite Co.
Fischer & Porter Co.
General Electric Co., X-Ray Dept.
Taylor Instrument Companies
Terriss—Consolidated Industries
Wilkens-Anderson Co.

Incubators, bacteriological
Chicago Apparatus Co.
Precision Scientific Co.
Wilkens-Anderson Co.

Indicators, cooking, freezing
Aseptic-Thermo Indicator Co.
Easterday Paint & Chem. Co.

Instruments, laboratory
American Optical Co.
Bausch & Lomb Optical Co.
Beckman Instruments, Inc.
Brabender Instruments Inc., C. W.
Daystrom, Inc.
Industrial Instruments, Inc.
L.E.E. Inc.
Leeds and Northrup Co.
Lumenite Electronic Co.
Minneapolis-Honeywell Regulator Co.
Palmer Thermometers, Inc.
Precision Scientific Co.
Taylor Instrument Companies
Terriss—Consolidated Industries
United Co., The
Wallace and Tiernan, Inc.

Instruments, time, temperature, flow, level—recording, indicating, controlling
American Optical Co.
Aseptic-Thermo Indicator Co.
B-I-F Industries, Inc.
Barkley & Dexter Labs, Inc.
Bristol Co.
Buffalo Meter Company, Inc.
Daystrom, Inc.

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For Effective and Enthusiastic Merchandising of Food Products

Equipment/Supplies Index

SECTION G
Control Lab Equipment, Instruments, Supplies

Electric Auto-Lite Co.
Electro Mechanisms Inc.
Fenwal Inc.
Fischer & Porter Co.
Foxboro Co.
Greer Co., J. W.
Howe Scale Co.
Industrial Instruments, Inc.
Industrial Nucleonics Corp.
L.E.E. Inc.
Langsenkamp Co., F. H.
Leeds and Northrup Co.
Liquidometer Corp.
Logeman Co., C. W.
Minneapolis-Honeywell Regulator Co.
Palmer Thermometers, Inc.
Partlow Corp.
Peco Corporation
Powers Regulator Co.
Richardson Scale Co.
Stephens-Adamson Mfg. Co.
Taylor Instrument Companies
Wallace and Tiernan, Inc.
Warrick Co., Charles F.
Weston Electrical Instrument Corp.
Wilkens-Anderson Co.

Meters, pH

B-I-F Industries, Inc.
Beckman Instruments, Inc.
Bristol Co.
Foxboro Co.
Leeds and Northrup Co.
Macbeth Corp.
Precision Scientific Co.
Taylor Instrument Companies
Terriss—Consolidated Industries
Wilkens-Anderson Co.

Microscopes

American Optical Co.
Bausch & Lomb Optical Co.
Wilkens-Anderson Co.
Zeiss, Inc., Carl

Mixers and mills, laboratory

Brabender Instruments Inc., C. W.
Chicago Apparatus Co.
Metal-Glass Products Co.
Mixing Equip. Co., Inc.
Southwestern Engineering Co.
Stokes Corp., F. J.
Sturtevant Mill Co.
Union Standard Equipment Co.
U.S. Stoneware Co., Plastics & Synthetics Div.
Wilkens-Anderson Co.

Mold count equipment

American Optical Co.
Bausch & Lomb Optical Co.

Reagents

Du Pont de Nemours & Co., E. I.
Wilkens-Anderson Co.

Refractometers

American Optical Co.
Bausch & Lomb Optical Co.
Chicago Apparatus Co.
Minneapolis-Honeywell Regulator Co.
Wilkens-Anderson Co.
Zeiss, Inc., Carl

Saccharimeters

Bausch & Lomb Optical Co.
Minneapolis-Honeywell Regulator Co.
Taylor Instrument Companies
Wilkens-Anderson Co.

Scales, drained weight

Chicago Apparatus Co.
Exact Weight Scale Co.
Fairbanks, Morse & Co.
Howe Scale Co.
Pennsylvania Scale Co.
Toledo Scale Co.
United Co., The

Specific gravity equipment

Bristol Co.
Fischer & Porter Co.
Foxboro Co.
Industrial Nucleonics Corp.
Minneapolis-Honeywell Regulator Co.
Taylor Instrument Co.

Thermometers, center temperature measurement instruments

Bristol Co.
Chicago Apparatus Co.
Daystrom, Inc.
Fenwal Inc.
Foxboro Co.
Greer Co., J. W.
Minneapolis-Honeywell Regulator Co.
Palmer Thermometers, Inc.
Partlow Corp.
Precision Scientific Co.
Taylor Instrument Companies

Texture Meters

Bridge Machine Co.
L.E.E. Inc.
Wilkens-Anderson Co.

Vacuum gauges

Bristol Co.
Chicago Stainless Equipment Corp.
Foxboro Co.
Minneapolis-Honeywell Regulator Co.
National Research Co.
Stokes Corp., F. J.
Taylor Instrument Companies
Wallace & Tiernan Inc.
Wilkens-Anderson Co.

Viscosity instruments

Brabender Instruments Inc., C. W.
Bristol Co.
Brookfield Engineering Lab., Inc.
FMC Corporation
Fischer & Porter Co.
Foxboro Co.
Precision Scientific Co.
Wilkens-Anderson Co.

Water testing equipment

Barnstead Still & Sterilizer Co.
Industrial Instruments, Inc.
Klenzade Products, Inc.
Precision Scientific Co.
Terriss—Consolidated Industries
Wallace and Tiernan, Inc.
Wilkens-Anderson Co.

SECTION H
Special Services

Engineering consultants

Baldwin-Lima-Hamilton Corp.
Barkley & Dexter Labs, Inc.
Belt-Ice Corp.
Bemis Bros. Bag Co.
Benner-Nawman, Inc.
Brooks Chemicals, Inc.
FMC Corporation
Fernholtz Machinery Co.
Fibreboard Paper Products Corp.
First Machinery Corp., Falcon Mfg. Div.
General American Transportation Corp., Process Equip. Div.
Greer Co., J. W.
Groen Mfg. Co.
Key Equipment Co.
Krenz Inc., Oscar
Ladish Corp.
Leeds and Northrup Co.
Minnesota Mining and Mfg. Co.
Republic Steel Corp.
Southwestern Engrg. Co.
Waldorf Paper Products Co.

Field warehousing

American Express Field Warehousing Corp.
Douglas-Guardian Warehouse Corp.
Haslett Warehouse Co.
Lawrence Warehouse Co.
New York Terminal Warehouse Co.
St. Louis Terminal Field Warehouse Co.
U.S. Steel Corp.

Financing

American Express Field Warehousing Corp.
St. Louis Terminal Field Warehouse Co.

Insurance

California Food Industry Insurance Co.
Manufacturers & Wholesalers Indemnity Exchange
Pacific Employers Group Ins. Co.
Universal Underwriters
Warner Co., L. B.

Labor

Manpower Inc.

Laboratories, consulting

Barkley & Dexter Labs, Inc.
Buffalovak Equipment Div., Blaw Knox Co.
Evans Research & Development Corp.
FMC Corporation
Food and Drug Research Labs., Inc.
Greer Co., J. W.
Mayer & Sons Co., H. J.
Rhodia Inc.
Wisconsin Alumni Research Foundation

Machinery leasing

Clark Equipment Co.
Crompton & Knowles Packaging Corp.
Cuyler Corp., Otto W.
Dudley Machinery Corp.
Ekco-Elcoa Containers, Inc.
Fibreboard Paper Products Corp.
First Machinery Corp., Falcon Mfg. Div.
Gisholt Machine Co.
Greer Co., J. W.
Key Equipment Co.
United Can Div., Hunt Foods Industries

Special Reports

Sanitation consultants

Brooks Chemicals, Inc.
Diversey Corp.
DuBois Chemicals, Inc.
Economics Lab., Inc.
Klenzade Products, Inc.
Rhodia Inc.
Sellers Injector Corp.

Transport—highway

Butler Mfg. Co.
Consolidated Freightways, Inc.
McGraw-Edison Co.
Merrifield Trucking Co.
Midwest Emery Freight System, Inc.
Pacific Intermountain Express
Ringsby Truck Lines, Inc.
Sea-Land Service, Inc.

Transport—rail

General American Transportation Corp., Process Equip. Div.
McGraw-Edison Co.
New York Central Systems
North American Car Corp.
Pullman-Standard Car Mfg. Co.
Santa Fe Railway Co.
Union Asbestos & Rubber Co.

Transport—water

Isbrantsen Company, Inc.
McGraw-Edison Co.
Sea-Land Service, Inc.

Warehousing—refrigerated

City Products Co.
Continental Freezers of Ill., Inc.
Haslett Warehouse Co.
Merchants Refrigerating Co.
Northwestern Ice & Cold Storage Co.
Quincy Market C. S. & Whse. Co.
Terminal Ice and Cold Storage Co.
Trans-American Refrigerated Svc. Ltd.
Wisconsin Cold Storage Co.

Miscellaneous services

Advertising Checking Bureau

SECTION I

Contract Packers of Food Products in Aerosol Containers

Aeropak, Inc., 500 W. 41st St., Chicago 50, Ill.

Aerosol Foods Corp., 160 Washington St., North Boston, Mass.

G. Barr & Company, 3601 S. Racine, Chicago, Ill.

Brooks Foods, Inc., Collinsville, Ill.

Morton Company, 1625 N. Highland, Memphis 8, Tenn.

New England Pharmaceutical, 2013 Outer Dr., Dearborn, Mich.

Pace, Inc., P.O. Box 206, Wilmington 99, Del.

Pennsylvania Engineering Co., 1107-21 N. Howard St., Philadelphia 23, Pa.

Peterson Filling and Packaging Co., Hegeler Lane, Danville, Ill.

Protection Chemical and Aerosol Products Ltd., 5747 Souligny St., Montreal 5, Quebec

Press 'N Serve Foods, Inc., 3814 Nebraska St., St. Louis 18, Mo.

Rich Products Corp., 1145 Niagara, Buffalo, New York

Stalford & Sons, 319 W. Pratt St., Baltimore, Md.

Stanley Home Products Co., National Contracts Div., 116 Pleasant St., Easthampton, Mass.

Zenith Chemical Corp., 175 Mount Pleasant Ave., Newark, N.J.

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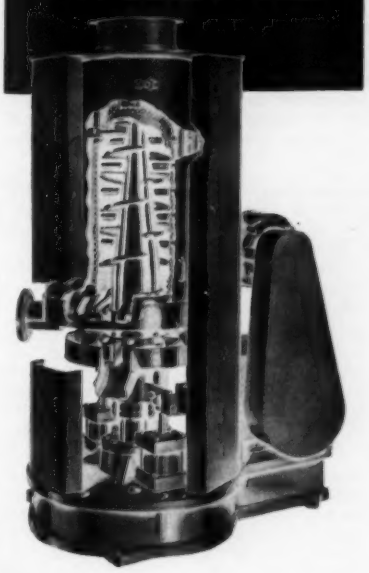

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Catalogs, Bulletins, Brochures Offered by Manufacturers

Section A—PREPARATION AND PROCESSING EQUIPMENT

Tank Cover: Catalog #54 describes "Lite-Kote" covers that are made from a tough fabric and impregnated to resist oils, grease, alkalis & most acids; various applications are also discussed—Robin W. Adair Co., Inc., Avoca 9, N. Y. Circle No. 101.

Sterilizer: Specification sheet describes a laboratory agitating sterilizer unit for experimental and development studies on the processing of new products—Berlin Chapman Co., Berlin, Wis. Circle No. 102.

Evaporators: Catalog No. 393 describes a line of evaporators giving product applications, with special emphasis on evaporating food products—Blaw-Knox Co., Buflovak Equipment Div., 1637 Fillmore Ave., Buffalo 11, N. Y. Circle No. 103.

Food Handling Belts: Loose leaf catalog detailing and illustrating in color sanitary food handling belts—treated and untreated white cotton belts, wire conveyor and glazed belting—Burrell Belting Co., 7501 N. St. Louis Ave., Skokie, Ill. Circle No. 104.

Fillers: Bulletin #106-4-61 describes various single and twin piston filling machines for the handling of semi-solid and viscous products—F. L. Burt Co., 1144 Howard St., San Francisco 3, Calif. Circle No. 105.

Mill: 4-page brochure describes the Cogmill, a grinder, granulator, pulverizer and blender in one unit, giving its uses and operation—The Cog Corp., Div. of Motiograph, Inc., 4441 W. Lake St., Chicago 24, Ill. Circle No. 106.

Suspension Magnet: Bulletin describes a floating roller-type magnet counter-balanced over product-conveying belt. Its height is self-adjusted which prevents damage to such fragile items as cut corn, peas, berries, etc.—Columbia Engineering Service Co., 4025-37 Sebastopol Hwy., Santa Rosa, Calif. Circle No. 107.

Magnetic Trap: Bulletin 1910-D describes the magnetic "tramp iron" trap which can be installed in any product line to remove metallic refuse—Dings Magnetic Separator Co., 4740 W. Electric Ave., Milwaukee 46, Wis. Circle No. 108.

Sorting Machines: Three bulletins describe 1-Model G photoelectric color sorting machine designed for the lemon and tomato industries, 2-pneumatic separator designed to clean and sort free flowing materials; 3-bowl feed machines that color sort beans, peas, corn, cereals, etc. —Electric Sorting Machine Co., Div. of Mandrel Industries, Inc., 5134 Glenmont, Houston, Texas. Circle No. 109.

Multi-Purpose Dumpers: Catalog 59 describes a variety of dumpers that lift and dump all free flowing material, standard and special containers—Essex Conveyors, Inc., 101 Colden St., Newark 3, N. J. Cricle No. 110.

Filling Equipment: Illustrated literature explains the basic principal of auger filling for powder, paste and granular products; shows 4 methods to accurately weigh, pack, vacuum and volumetrically fill containers—FMC Corp., Stokes & Smith Plant, 4900 Summerdale Ave., Philadelphia 24, Pa. Circle No. 111.

Food Pump: Brochure describes the 'Quick Clean' food pump for pumping a full range of food products. It has all stainless steel parts and a capacity of up to 200 gallons per minute—Fernholtz Mfg. Co., 8468 Melrose Place, Los Angeles 46, Calif. Circle No. 112.

Food Processing Equipment: Bulletin #1 describes various processing equipment and bulletin #2 is a handy reference of engineering constants, short cut tables and formulas for in plant operation—First Machinery Corp., 209-289 10th St., Brooklyn 15, N. Y. Circle No. 113.

Continuous Presses: Bulletin fully describes the newly designed Zenith presses for automatic fruit and vegetable juice extraction and waste disposal — E. D. Jones Corp., Pittsfield, Mass. Circle No. 114.

Food Handling Pans: Brochure describes stacking and nesting containers designed especially for the food handling field. They are smooth, seamless, and of one-piece construction making them easy to clean—G. B. Lewis Co., 616 Montgomery St., Watertown, Wis. Circle No. 115.

Liquid Filling Machines: Catalog #541-5 describes automatic and semi-automatic gravity, vacuum and displacement filling machines to accommodate containers from fractional ounces to 5 gallons (plastic, glass and metal)—MRM Co., Inc., Plainview, L. I., N. Y. Circle No. 116.

Tumbler Feeder: Bulletin describes a machine that will single file and/or air clean tapered tumblers by feeding them in an upright position—Machinery Service, Inc., Box 14067, Louisville, Ky. Circle No. 117.

Food Processing Equipment: Booklet entitled "Food-1961" has photos and short descriptions of the latest installations of Lo-Temp evaporation, product handling automation, tanks for product holding designed for CIP cleaning, essence recovery for preserve operations, and UHTST processing of juices—Majonnier Bros. Co., 4601 W. Ohio St., Chicago 44, Ill. Circle No. 118.

Automatic Drum Warmers: Bulletins available are: 2C-5 gal. pail warmer; L. H. tilting horizontal warmer sheet; and 4-page specifications bulletin on vertical warmer. Warmers are available in all sizes, all voltages, with controlled temperatures to 550° F.—Harold L. Palmer Co., 28625 Grand River Ave., Farmington (Detroit), Mich. Circle No. 119.

Metal Detector: Catalog E. 4322 describes RCA electronic metal detector which detects all types of tramp metal, magnetic as well as non-magnetic. It can also be used to activate alarm, warning light or rejection device for removal of contaminated items—Radio Corp. of America, Industrial Electronic Products, Front and Cooper Sts., Building 15-4, Camden, N. J. Circle No. 120.

Can/Bottle Crushers: Bulletin describes and illustrates a line of can and bottle crushers—Rescor Industries, Div. of C. Q. Sherman Associates, Inc., Bar Building, 9 West Prospect Ave., Mount Vernon, N. Y. Circle No. 121.

Water Blanchers: Bulletin No. TL-W1 describes a new stainless steel screw-type blancher with unique bucket-type discharge reel permits complete immersion of product and substantially higher capacities—Rietz Mfg. Co., 150 Todd Rd., Santa Rosa, Calif. Circle No. 122.

Pickle Packer: Bulletin describes a straight-line, stainless steel pickle packer—Solbern Mfg. Co., P.O. Box 567, Kulick Rd. & Fairfield Rd., Caldwell Township, N. J. Circle No. 123.

Nozzles: Literature available on spray nozzles include Catalog 59, bulletins, data sheets, and comparison charts — Wm. Steinen Mfg. Co., 43 Bruen St., Newark 5, N. Y. Circle No. 124.

Freeze-Drying: 1-Booklet on vacuum freeze-drying gives a background of this processing method, 2- Vacuum Dryer Selection, 3-Packaged Freeze Dryers gives specifications of 4 models for pilot plant, research and production applications—F. J. Stokes Corp., 5500 Tabor Rd., Philadelphia 20, Pa. Circle No. 125.

Processing Equipment: 4-page bulletin illustrates over 40 pieces of processing equipment used in the food industry and available in stainless as well as monel and nickel — Terriss-Consolidated Industries, 22 Wooster St., New York 13, N. Y. Circle No. 126.

Pressure/Temperature Recorders: Catalog 800 describes temperature and pressure recorders of bourdon tube and bellows type, with several types of actuation—U.S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa. Circle No. 127.

Refrigeration: Folder illustrates and describes a full line of Vilter refrigeration and air conditioning equipment, including installation photographs — Vilter Mfg. Corp., 2217 S. 1st St., Milwaukee 7, Wis. Circle No. 128.

Section B—FOOD INGREDIENTS AND ADDITIVES

Sucaryl: Technical bulletin #115 includes articles dealing with the general, chemical, analytical, pharmacology, clinical, laws, regulations, dietetic market, patents, and etc. of sucaryl—Abbott Laboratories, 14th & Sheridan Rd., North Chicago, Ill. Corcle No. 129.

Corn Sweeteners: Four brochures describe an entire range of corn sweeteners, corn syrups, and dextrose, providing ready reference for comparison of properties and uses—Corn Products Sales Co., 10 East 56th St., New York 22, N. Y. Circle No. 130.

Flavors/Colors: "Food for Thought" gives a description of the flavors and colors manufactured and distributed by—Food Materials Corp., 2711 W. Irving Park Rd., Chicago 18, Ill. Circle No. 131.

Vitamin A: "The Story of Vitamin A Right From Roche" provides a word-and-picture tour through the world's largest vitamin A plant — Hoffman-La Roche, Nutley 10, N. J. Circle No. 132.

Spices: Bulletin #6 describes pure natural spices produced with no loss of volatile flavor components; bulletin #62 describes standarized and stabilized Spanish paprika in any color value (ASTA) for control of color and yield to values of 8000 units/lbs.—H. J. Mayer & Sons Co., Inc., 6811 S. Ashland Ave., Chicago 6, Ill. Circle No. 133.

Food Starches: Bulletin 101 has a complete and concise table and check chart showing properties, special features and applications of gums, cookup and pregelatinized food starches — Morningstar-Paisley, Inc., 630 W. 51st St., New York 9, N. Y. Circle No. 134.

Food Starches: Technical service bulletins (Purity 69 & Instant Clearjel) describe the uses, property and applications for each product, plus including viscosity curve charts showing results of tests—Natl. Starch & Chemical Corp., 750 Third Ave., New York City. Circle No. 135.

Color: Certified color information booklet contains solubility tables and a variety of application formulas for FD&C colors —Warner-Jenkinson Mfg. Co., 2526 Bladwin St., St. Louis 6, Mo. Circle No. 136.

Section C—RAW PRODUCT EQUIPMENT AND SUPPLIES

Commercial Growers' Price List: Burpee's 1962 Blue List Catalog, containing special wholesale prices for commercial growers of vegetables, will be available October 1, 1961—W. Atlee Burpee Co., Commercial Growers Div., 18th & Hunting Park Ave., Philadelphia 32, Pa. Circle No. 137.

Vegetable Seeds: Catalog entitled "Burrell's Better Seeds" contains photographs and descriptions of vegetable varieties—D. V. Burrell Seed Growers Co., Rocky Ford, Colo. Circle No. 138.

Sprayers: 16-page catalog details and illustrates a complete line of aircrop sprayers—John Bean Div., FMC Corp., Lansing 9, Mich. Circle No. 139.

Pyrenone Insecticide Concentrate: Folder is a summary of tolerances and extensions—Fairfield Chemicals, FMC, 441 Lexington Ave., New York 17, N. Y. Circle No. 140.

Seed Catalog: "Rogers Brothers Company 1961 Seed Catalog" gives a descriptive listing of peas, beans and sweet corn—Rogers Brothers Company, P.O. Box 2188, Idaho Falls, Idaho. Circle No. 141.

Processors' Guide: "SRS Food Processors' Guide" describes in detail the vegetable varieties used for food processing—Seed Research Specialists, Inc., P.O. Box 3091, Modesto, Calif. Circle No. 142.

Want a Bulletin? Get it the easy way—See Page 81.

Section D—MAINTENANCE, LUBRICATION, SANITATION EQUIPMENT AND SUPPLIES

Pressure Washer: 4-page bulletin gives detailed information of the Hydro-Air Pressure Washer—D&M Products, Inc., 26 N. Raymond Ave., Pasadena, Calif. Circle No. 143.

Sanitation: 1-Canning Plant Sanitation Purchasing Guide, 2-Special Insecticide Catalog which lists FDA approved insect killers—Diversey Corp., 1820 Roscoe St., Chicago 6, Ill. Circle No. 144.

Silicone Defoamers: Bulletin entitled "ABC's of Defoaming" is a complete reference to the use of silicone defoamers, giving the answers to what, where and how — Dow Corning Corp., Midland, Mich. Circle No. 145.

Floor Protection: Technical bulletin RTB-70F describes, giving directions, the use of Resiweld Epoxy Topping Compound for floor protection from acids as well as repairing deteriorated floors—H. B. Fuller Co., 1150 Eustis St., St. Paul 8, Minn. Circle No. 146.

Sanitation: "Klenzade Sanitation Program for the Canning and Frozen Food Industries" describes the firm's plant sanitation survey, program development, technical services, technical literature, and educational program—Klenzade Products, Inc. P. O. Box 1020, Beloit, Wis. Circle No. 147.

Liquid CO_2: Brochure gives a dry ice loading chart—Liquid Carbonic, Div. of General Dynamics, 4400 W. 45th St., Chicago 32, Ill. Circle No. 148.

Lubrication: Lubriplate Data Book G1-A gives a comprehensive treatment of lubrication in general with particular reference to lubriplate recommendations for all types of machinery and mechanical equipment—Lubriplate Div., Fiske Bros. Refining Co., 129 Lockwood St., Newark 5, N. J. Circle No. 149.

Water Treatment: Service bulletin 24-B describes a new water treatment material for retorts and cooling canals in canning plants. Tells how to eliminate water spotting, obtain bright surfaces, improve label adhesion — Oakite Products, Inc., 44F Rector St., New York 6, N. Y. Circle No. 150.

Chemicals: "Product Protection Through Chemistry" describes uses of fungicides and bactericides to promote sanitation and longer service life for wooden packing cases, pallet bins and other items susceptible to mildew—Scientific Chemicals, Inc., 1637 S. Kilbourne Ave., Chicago 23, Ill. Circle No. 151.

Floor Surfacing: Bulletin describes a new epoxy-type floor patch or overlay material which is highly resistant to corrosion by acids—Stonhard Company, Inc., 401 Broad St., Philadelphia 8, Pa. Circle No. 152.

Waste Disposal: Case history gives problem, solution and results of how slaughter house wastes can be pumped from dressing area to disposal with a Wemco Torque-Flom Pump—Western Machinery Co., 650 5th St., San Francisco, Calif. Circle No. 153.

Section E—HANDLING, CONVEYING AND POWER EQUIPMENT

Belting: "Buyer's Guide" was prepared to give the superintendent or the purchasing agent a quick reference and price lists of the popular types of belting—Globe Woven Belting Co., Inc., 1400 Clinton St., Buffalo 6, N. Y. Circle No. 154.

Steel Conveyor Belts: Catalog describes and illustrates the use of flexible steel open-mesh, conveyor belts in the food industry—LaPorte Mat & Mfg. Co., P.O. Box 124, LaPorte, Ind. Circle No. 155.

Pump: 8-page bulletin # 258 describes and illustrates a new low-flow pump, the Milroyal Controlled Volume Pump, which features a totaly-enclosed self-lubricated drive—Milton Roy Co., 1300 E. Mermaid Lane, Philadelphia 18, Pa. Circle No. 156.

Boilers/Burners: Bulletin #1271 describes boilers and burners that are manufactured by Orr and Sembower, P.O. Box 1138, Reading, Pa. Circle No. 157.

Belting: Folder describes a conveyor belt of solid-woven cotton construction, press-cured, to meet the needs of food and canning industries — Russell Mfg. Co., Middletown, Conn. Circle No. 158.

Belt Cleaning System: Bulletin 448, Sellers Hydraulic Jets, describes a new automatic belt cleaining system for canning plants that keeps bacteria count down—Sellers Injector Corp., 1600 Hamilton St., Philadelphia 19, Pa. Circle No. 159.

Conveyors: Handidrive bulletin 112 describes a complete line of stocked, pre-engineered, unit-handling gravity and power conveyors, giving application, selection and ordering information—Standard Conveyor Co., North St. Paul 9, Minn. Circle No. 160.

Air Actuated Valves: 36-page Flow Control Catalog gives full specification on Tri-Clover, Fesco line, of air actuated valves and automated control components —Tri-Clover Div., Ladish Co., Kenosha, Wis. Circle No. 161.

Drives: Booklet G-2500 gives a pictorial presentation of various process control systems, using AIRtrol Controlled Motodrives—Reeves Pulley Div., 1225 7th St., Columbus, Ind. Circle No. 162.

Palletless Handling: Booklet entitled "A Plan For Reducing Materials Handling Costs" describes palletless handling, a plan to reduce materials handling costs for packers—Armstrong Cork Co., West Liberty St., Lancaster, Pa. Circle No. 163.

Safe-Driving Hints: "Safety-Operating Hints" is a 28-page, pocket-size booklet of safe fork truck driving procedures with cartoon illustrations—Baker Industrial Trucks Div., Otis Elevator Co., 8028 Baker Ave., Cleveland 2, Ohio. Circle No. 164.

Motors: Specification sheets describe totally enclosed single phase fan cooled motors—Brook Motor Corp., 3302-04 W. Peterson Ave., Chicago 45, Ill. Circle No. 165.

Pneumatic Bulk Trailer: Booklet tells how pneumatic trailers can assist in distribution by handling large bulk shipments —Butler Mfg. Co., 7400 E. 13th St., Kansas City 26, Mo. Circle No. 166.

Bulletins

Power Transmission Equipment: Bulletin A727 illustrates and describes shaft couplings, mounted industrial bearings, shaft mounted speed reducers, pulleys, chain and sprockets, v-belt drives, clutches, dry fluid drives and couplings—Dodge Mfg. Corp., Mishawaka, Ind. Ciicle No. 167.

Section F—PACKAGING EQUIPMENT, CONTAINERS & SUPPLIES

Can Handling System: Booklet describes a can handling system that includes an air chain equipped truck and accumulating system, transfer car, pallet unstacker, and an empty pallet stacker—Alvey Conveyor, 9301 Olive Street Rd., St. Louis 32, Mo. Circle No. 168.

Cord Strapping: "Avistrapper" catalog describes and illustrates two automatic strapping machines (Models AVM-1 and AVM-2); the first for use with "Avistrap" cord strapping, the 2nd with new strong rayon packaging material—American Viscose Corp., Industrial Packaging Dept., 1617 Pennsylvania Blvd., Philadelphia 3, Pa. Circle No. 169.

Aluminum Foil Can: Colorful booklet describes the new lamianted foil can which offers to food processors a liquid-tight container with significant economical, product protection and merchandising advantages—Anaconda Aluminum Co., P. O. Box 1654, Louisville 1, Ky. Circle No. 170.

Adhesives: 16-page catalog describes a wide range of applications for 5 types of adhesives developed for the packaging and paper converting fields—Armour Alliance Industries, 161123 Armour St., N.E., Alliance, Ohio. Circle No. 171.

Packaging Machine: The BFM multiple packeter for free-flowing, semi-viscous, liquids and/or powders and granular products is described in a 6-page brochure —Brown Filling Machine Co., Inc., Ann Arbor, Mich. Circle No. 172.

Stamp Machine: Bulletin describes a 200 per minute strip stamp machine that applies precoated thermo plastic heat seal government tax stamps — John Burton Machine Corp., 1600 West St., Concord, Calif. Circle No. 173.

Packaging Machinery: H1/660-Push Button Savings; 602W-Sure Way Package Caser; 603W-What's All This About Freeze-Drying?; 604W-FMC Universal Corn Cutter, Model 3AR; 167/7-60-Non-Shock Caser, Model 3; 165/3-60 Non-Shock End-Open Caser, Model 10; 148/6-60-Non-Shock End-Open Caser, Model 20; 171/1-61-18 Valve Filler, Model 180 —Canning Machinery Div., FMC Corp., 333 W. Julian St., San Jose, Calif. Circle No. 174.

Cartoner: Folder describes the Redington "Automax" Cartoner with new pocket intake and wide range flexibility for automatic cartoning of both large and immediate volume production of a variety of products—Crompton & Knowles Packaging Corp., Agawam, Mass. Circle No. 175.

Gluing Method: 4-page folder describes Standard-Knapp pressure fed system for applying glue to case flaps in case sealing —Emhart Manufacturing Co., 127 Main St., Portland, Conn. Circle No. 176.

Packaging System: Bulletin describes forming and closing machines that are part of the Diotite cartoning system for frozen and other foods—Folding Carton Div., Continental Can Co., 530 Fifth Ave., New York 36, N. Y. Circle No. 177.

Carton/Former: Brochure describes Ultra-Pak, a hermetically sealed container, and the form-fill-seal machines which produce this tetrahedron shaped Ultra-Pak—Packaging Frontiers, Inc., Waltham Industrial Center, P. O. Box 537, Waltham, Mass. Circle No. 118.

Boxes: Bulletin tells how automatic packaging can be had with Gaylord boxes—Gaylord Container Div., Crown Zellerbach Corp., 1 Bush St., San Francisco, Calif. Circle No. 179.

Case Sealer Taper: Brochure describes new, shorter machine that automatically adjusts to any size case, closes top flaps, and seals top and bottom of intermixed size cases—General Corrugated Machinery Co., Inc., 141 W. Central Blvd., Palisades Park, N. J. Circle No. 180.

Labeler: Bulletin describes the "Masterline" neckwrap labeler which applies thermoplastic labels to the necks of bottles at speeds to 180 BPM; allows unlimited choice of paper and design—Gisholt Machine Co., 1245 E. Washington Ave., Madison 10, Wis. Circle No. 181.

Coding: "Handy Marking Ideas File Folder Catalog" and "Mechanics of Initiating and Maintaining a Successful Code-Dating System" — Adolph Gottscho, Inc., Hillside 5, N. J. Circle No. 182.

Compound Liners: Bulletin 3610 contains description, data, and specifications of compound liners — Industrial Equipment Div., Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa. Circle No. 183.

Coding: 4-page brochure completely describes and illustrates a full line of marking and coding equipment for production lines—Industrial Marking Equipment Co., Inc., 655 Berriman St., Brooklyn 8, N. Y. Circle No. 184.

Foil Containers: Booklet contains detailed information on complete line of containers available for the frozen foods, bakery, dairy or food serving industries—Kaiser Aluminum & Chemical Sales, Inc., 300 Lakeside Drive, Oakland 12, Calif. Circle No. 185.

Packaging Machine: Brochure describes the new improved automatic bag-forming, filling and sealing machine with a "hand-over-hand" drawbar action—Lynch Corp., P.O. Box 271, Anderson, Ind. Circle No. 186.

Packaging Machine: Brochure illustrates and describes the new package Transwrap S-750, an automatic bag forming, filling and sealing machine—Package Machinery Co., East Longmeadow, Mass. Circle No. 187.

Can Line Automation: Handbook tells how to automate can lines, provide surge storage, and increase production from existing equipment with diagrams of typical installations and controls — PECO Corp., 111 Ortega Ave., Mountain View, Calif. Circle No. 188.

Adhesive: Bulletin describes critical factors for use of Polybond G-1448 adhesive in laminating Mylar to treated polyehtylene for boilable pouch structures—Polymer Industries, Inc., Springdale, Conn. Circle No. 189.

Spiral Containers: "An Introduction to R-C Can Co." describes the engineering, laboratory, and design facilities of the company and the many types of spirally or convolutely wound containers—R-C Can Co., 9430 Page Ave., St. Louis 32, Mo. Circle No. 190.

Speed Drives: Catalog #700 features Lube-Free Variable Speed Drives that require no lubrication or maintenance—Sterling Electric Motors, Inc., 5401 Telegraph Rd., Los Angeles 22, Calif. Circle No. 191.

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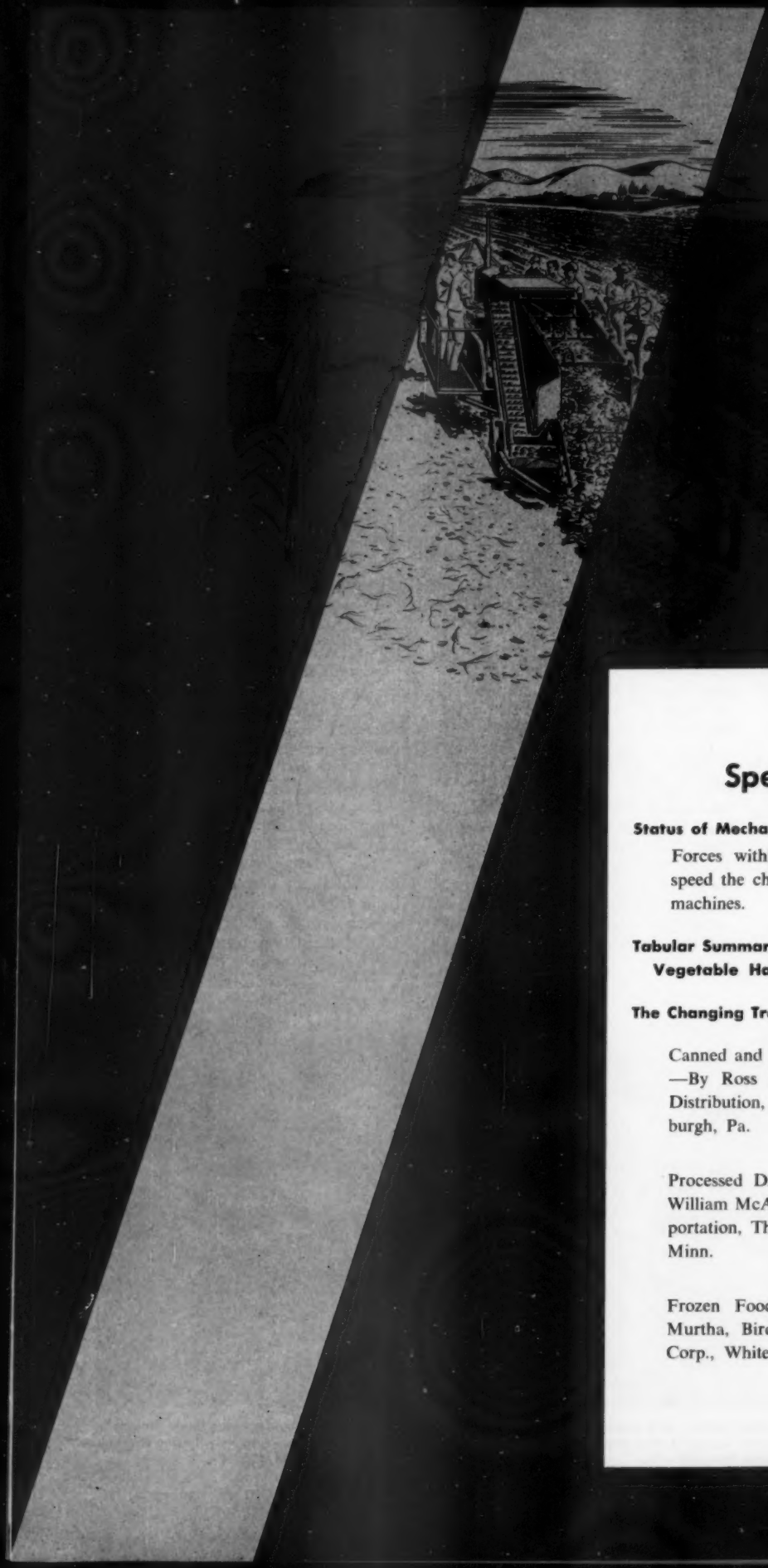

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Processed Dry Foods Transportation—By William McArthur, Vice President—Transportation, The Pillsbury Co., Minneapolis, Minn.

Frozen Foods Transportation—By B. J. Murtha, Birds Eye Div., General Foods Corp., White Plains, N.Y.

Status of Mechanical Harvesting

By DENNIS H. MURPHY
Managing Editor

Mechanical fingers can replace the hands of a migrant as cherries ripen in Michigan and prunes in California.

This year, tomato pickers move down rows of dwarf plants in Indiana, California, and New Jersey—and deftly scoop up vines and shake them vigorously so the ripe fruit drops away.

Next year, berry bushes may be trained to grow lopsided, and a great cumbersome machine looking like a tilted bedspring on wheels may lumber down the rows, shaking bushes and collecting the ripe fruit as it goes.

The tempo of mechanical harvest is changing. Potatoes and carrots have been grubbed from the soil by shovel-like devices for generations. So long as cheap labor was plentiful, the job of picking up potatoes from the ground and putting them in sacks was an efficient one. With shortages in labor, it was a simple matter to build a conveyor behind a digger and lift potatoes up to a wagon.

A man or two still sits along the belt and tosses out the rocks. But should labor pressure rise a point or two, there are mechanical fingers already sorting good beans from bad that can be retrained for the potato job.

It is a bothersome business, building machines to do the work of men. New plant varieties must be found; new growing methods used. Then the machine, fresh from the factory, may find itself in a rainy spell and learn it is not a mudder.

As great as these problems may be, there appears no mistake in the trend: the machines are coming.

Farming is Different

The big movement during the summer of 1961 was to modify experimental machines to pick fruits from trees which had been grown and pruned for hand-picking. The same process of adapting the machine to the plant was going on in the vegetable crops.

The pickle picker after seven summers was still trying to find mechanical means of meeting the many variations within the cucumber vine.

In orchards, cultural changes will eventually be made to improve the efficiency of the shaking-collecting mechanical harvester. Orchards will likely be larger. Trees will have a space of 30 inches between the ground and the first branching. They will be trained to develop relatively high heads and a minimum number of scaffold branches. The ground will be kept level and the spacing between trees may become wider. Fertilizer studies are being made to determine if the timing of the addition of plant nutrients has any effect on the ripening and separation of fruits. Varieties themselves will be studied for characteristics that appear to be beneficial in mechanical harvest.

Changes Are Slow

When a machine has been graduated from the experimental models to the production models, the speed of the change of the processing industry is dependent on the pressures involved. When a successful sweet corn harvester was offered to the industry 12 years ago, the corn canners started a transition that is still in progress today.

On the other hand, when the bean harvester appeared on the market, pressures from harvest labor and from the profit margin on canned beans forced a faster pace. The conversion is nearly complete in several bean growing areas of the nation.

Pressures Are Increasing

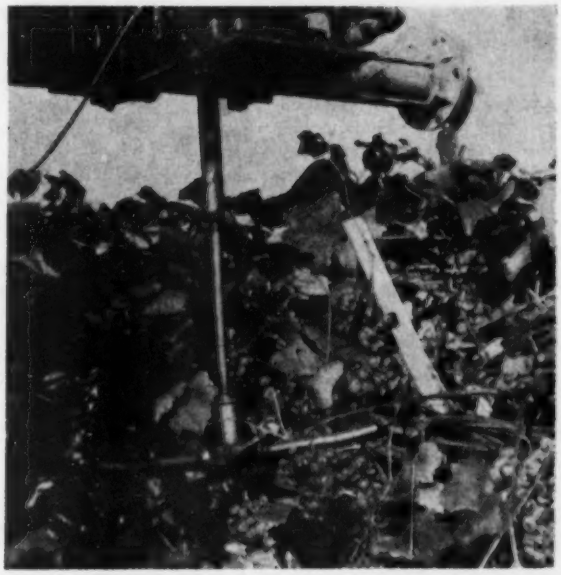
Changes in harvesting practices may not proceed at the same leisurely pace they have in the past.

The first disruptive force within the industry is the enthusiastic if not enlightened, influence of labor groups, church groups and others, in getting federal legislation for the, supposed,

TOMATO HARVESTER, an experimental machine built by FMC Corp., cuts vine below surface of the soil, moves the tangle of vine onto conveyor by means of the disks which revolve inwardly.

SWEET POTATO harvester developed by Louisiana State University for harvesting potatoes that will be sold entirely to the canning plants. The vines must be removed before digging.

APPLE EQUIPMENT under study includes a mobile platform (Blackwelder Mfg. Co.), a cloth funnel and a distributing device developed by the Tree Fruit Experiment Station, USDA, in Wenatchee, Wash.



CONCORD GRAPE harvester has a spiked wheel vibrator that runs along just under a single trellis wire. The wheel, developed at Cornell Univ., vibrates as it is rotated by the pull of vines.

sorry plight of the migrant workers.

The pattern of labor movement during the 1960 harvest season was seriously disrupted by union organizers in California and its effects were still felt during 1961. The AFL-CIO during the 1960 season formed picket lines around fruit ranches during the harvest season, threatened Braceros, signed up a few members and promised more activity during 1961.

However, the union ran out of funds early in the year and the Braceros program continued normally.

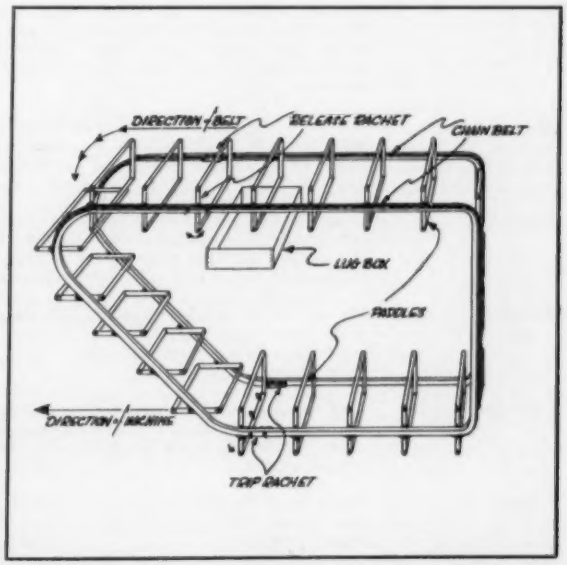
The Teamsters union threatened next to move in and back its demands with a truckers strike.

Then the Squeeze Starts

Any serious interruption of a major pattern of migrant movement will affect non-related commodities and may even upset the competitive relationships between geographical areas. One of the examples is the movement of Texans of Mexican descent from Texas into the sugar beet growing areas of the North Central Plain states. Many of these workers move on after thinning sugar beets to harvest cherries in Wisconsin, pick cucumbers in Michigan and tomatoes in Indiana and Illinois.

A shortening of the work year by

CITRUS PICKER is tested at the Florida Citrus Station. Spindles revolve fruit until it separates, then move it back along spindle until it drops into bag.



ASPARAGUS HARVESTER developed by Michigan State Univ. tests selective harvesting. The frames or paddles move down over asparagus, spin rapidly at the bottom to snap long stalks.

the successful employment of mechanical harvesters in the cherry orchards will likely force the mechanization of sugar beet thinning and add more pressure to the development of tomato harvesters. The successful development of a harvester of pear-shaped tomatoes, (mostly in California) ahead of a machine for the globe-shaped tomatoes, may well bring a change in the pack of tomatoes in the mid-West. With half the jobs gone in the Plain states, migrants will stop coming North. The crops still dependent on hand labor will go begging.

When the Jobs are Gone

The changes in the labor pattern seem unmistakable. An estimated 2 million persons, made up of domestic migrant workers and their families, and another 500,000 imported foreign workers are involved in the growing and harvest of agricultural crops. Some of these people are working at jobs under direct government control. All foreign workers, Mexicans, Canadians, British West Indians, and a few others are under contracts which meet government specifications one way or another.

Much of the rest of the agricultural labor, particularly in the Northern half of the United States, is subject to a voluntary supervision of the U.S. Department of Labor. The Federal department works with state departments in locating agriculture workers in the South and Southwest. It is a convenience for both the worker and the employer. The Department of Labor must be assured that the employer is paying the going wage for the area to his migrants and that the living and working conditions meet the state regulations on sanitation and health—or if no state regulations exist, then they must meet the standards recommended by the President's Committee on Migratory Labor.

These regulations are accepted by food processors as fair and effective. But as the federal laws are tightened further and the development of mechanical harvest speeded, an idle pool of unskilled labor will grow. The federal government will then face a problem it helped create, "How do you help the migrants, when the jobs are all gone."

STATUS OF MECHANICAL HARVESTING METHODS ON FRUIT AND VEGETABLES FOR PROCESSING

Vegetables	*Current Practices*	*Developments in Mechanization*	*Statistics**
Asparagus Green & White	V-bladed knives are used by pickers to cut asparagus, both on white (Calif.) and green (elsewhere).	Many experimental machines for harvest have been developed. (1, 2, 3, 41) Once-over machine is now thought too inefficient, since selective harvesters seem practicable.	110,000 A. for processing. 100% hand harvested. Rate of experimental machine 1½-2 A. per hr.
Beans Green & Wax snap bush-type	Most beans for fresh market are still hand picked. Changes in cultural practices and varieties permit machine harvest of most of processing crop.	Successful harvesting machines (1, 4) for green beans are being modified for wax and for higher capacities. New bean varieties are under development for still higher yields, fewer clusters.	165,000 A. are harvested for processing. 20% still hand picked. Machine rate ¾ to 1 A. per hour.
Beans Blue Lake pole-type	Major efforts underway to develop bush type Blue Lake. One experimental variety has been announced (5).	A pole bean harvester under test irregularly (6, 7) since 1954 has had a revised interest.	15,000 A. 100% hand harvested.
Beans Green Lima	Most harvesting is mechanized to some extent, though hand picking is found in the South. Beans may be cut, windrowed, leaded and vined. Or a field combine may move down the windrows. (8)	The mobile viner (8) is well accepted successor to conventional stationary viners (8, 9). Experimental machines have been developed 1, 2) to pick pods, but the most promising development seems to be an adoptation of snap bean pickers (1, 4) to limas.	80,000 A. for processing. 5% picked by hand, 15% by field combine. Combine rate ¼ to ½ A per hour.
Beets, red	Harvest is mechanized (10) to some 90% in the North and a lesser extent in the South.	Major problems of mechanical harvest have been solved by machine which lifts, tops and loads beets (10)	15,000 A. for processing. 15% by hand or partly by hand. Machine speed ¾-1 A per hr.
Broccoli	Crop, largely for freezing (60%) and fresh market (40%) is harvested by hand with some mechanical aids (40)	A device (39) used by Seabrook Farms, harvests 18 rows of broccoli simultaneously. A belt across the rows receives the broccoli heads as they are picked by pickers.	25,000 A. for processing. 100% by hand or with mechanical aids.
Brussels Sprouts	Harvest is a hand operation, with some care and dexterity needed to strip lowest sprouts from plant.	A mechanical aid was reported in use in california.	4,000 A 100% by hand.
Cabbage	Cabbage for kraut is harvested by hand. Heads are cut by machine, thrown to truck, caught, placed carefully in load.	Experimental machine (3) cuts and loads cabbage mechanically. A mechanical aid developed for fresh market (11) carries pickers, seated, along the row.	10,000 A. for kraut. 100% harvested by hand.
Carrots	For most of the processing market carrots are harvested with beet harvesters.	Mechanical problems are solved for the most part. Improvement will come from improvements in varieties.	9,000 A. 5% by hand. ¾ to 1 A. per hour.
Cauliflower	Harvesting and trimming are hand jobs done at the same time.	No mechanical harvesting devices have been reported.	3,000 A. for processing. 100% by hand.

Vegetables	*Current Practices*	*Developments in Mechanization*	*Statistics**
Corn	Harvest is predominately a machine operation.	Improvements are made periodically on an already successful machine (6).	425,000 A. 30% by hand. Machine rate, 1-1½ A per hr.
Cucumbers	Cucumbers for pickling are harvested by hand.	Mechanical pickers are under test in 1961 (1) after years of steady development. Work has also started on once-over harvester (3).	110,000 A. 100% by hand. Machine speed, ¼-½ A. per hr.
Onions	Harvest is largely by machine—pulling windrowing, topping, and loading.	Hand operations are still being displayed by machine harvest. Onions for processing may be topped, covered with dry soil until harvest (26).	90,000 A. dry onions per harvest 50c bu.
Peas, green	A long history of mechanized harvest is continued by packers along several lines.	Mobile viner (8) operating from windrows are increasing. Test machines to pick pea pods (1) continue. Unloading device (9) feeds vines to two double stationary viners.	400,000 A. 15% by combine. Speed ¼-½ A. per hr.
Peas, Southern Green shell	A Southern crop that is usually picked green by hand and dry by machine. Pods picked green do not shell efficiently in pea viners.	Techniques are developing (12) in cutting plants 9-10 in. high to remove pods and only minimum vine. (19) Also, snap bean harvester (1) is being revised to handle peas in wide row.	150,000 A. 60% by hand. ¾ to 1 A. per hour.
Peas, and beans dry limas, Navy, Kidney, and Pea beans	Normal harvest involves cutting, windrowing, loading Threshing is a separate operation or is done by field combine.	A machine under test (24) cuts and threshes the beans in one operation.	1,750,000 A. including dry limas.
Potatoes White or Irish	Vines are killed with chemical spray or removed by machine 10 days before harvest. Potatoes are dug mechanically, loaded by hand.	Mechanical loaders are now being used. Often a sorting belt allow inspectors to throw out stones and clods before potatoes are delivered to truck.	200,000 A. Hand labor rates 6c bu.
Potatoes Sweet	Sweet potatoes are dug by plow and picked up by hand. White potato diggers can be used but some damage is done to potatoes.	Several mechanical harvesters are in experimental stages (13, 14) and several more which are in production (15, 16, 17, 25). The development of a larger processing industry may speed mechanical harvest by providing market for misshapen and slightly damaged potatoes.	120,000 A. 90% by hand or with some mechanical aids. New harvesting machine rate, ½ A. per hr.
Pumpkin	Processing crop is usually harvested by hand labor.	A pumpkin loader (18) loads pumpkins from windrows.	12,000 A. for processing. Leader 60 tons per hr.
Spinach	Mechanical harvesting techniques have been developed for both market and processing crops.	Spinach may be cut and loaded with several (18, 19) harvesters. Varieties are being developed to grow more upright (12).	32,000 A. for processing with 10% cut by hand. Machines cut and load 8-10 tons per hr.
Tomatoes Pear or Globe type	Tomatoes are picked by hand and loaded into hampers or lugs.	Mechanical harvesters are under test (1, 3, 6, 18, 20, 21, 22, 23) and appear to become significant in harvest of pear-type tomatoes first. Dwarf varieties for mechanical harvest are underway.	300,000 A. 100% by hand. Test machines rate around ¼ A. per hr. Labor rates 12c hamper, 15c Calif. lug (50 lbs.).
Fruits	*Current Practices*	*Developments in Mechanization*	*Statistics**
Apples	Picking is still a hand job. Once apples are picked bulk handling is becoming more common. Bulk boxes tested in field (27) show less damage to fruit than field boxes.	Picking aids that use a vacuum hose with an aluminum head have been tried, with little success. A picking funnel which allows picker to pick-and-drop fruit increases efficiency 40%. A mobile platform (20, 33) with picking funnel doubles efficiency but raises costs. Inquiry is being made (27) on use of hedge rows from dwarf trees, 12' apart, pruned by machine and picked, two rows at a time with a dozen pickers riding a mobile platform-collector.	120,000 A 95% by hand. Speed of top picker with experimental funnel and mobile platform 250 bu. per hr. Hand labor rates 18-25c bu.
Apricots	Traditional hand packing of stone fruits is beginning to make way for mechanical harvest techniques: modification of pruning to eliminate long and low hangers, 30 inches to first crotech. Shaking trees harvests fewer greens than hand picking.	Tractor mounted shakers and catching frames, available from several manufacturers (28, 29, 30, 31, 32) will be used to a larger extent in California. Mechanical tree topping has been tried successfully (23) and summertime mowing of top growth of trees seen possible (23).	40,000 A.
Blueberries Cultivated	The wild blueberries are still more than match for the machine age. But in the cultivated varieties, the trend is from hand-picking to mechanical aids to harvesters.	A picking aid, a hand-held hose, when used with a canvas collecting frame allowed pickers to triple production. By using a mechanical vibrator the production increased to 3½ times. A mechanical harvester (continuous) was tested in 1961 (3).	10,000 A. Cost of hand harvest 8c lb. Mechanical aids 3½c lb. Rubber hose flail 23 lbs. per hr. Vibrator 28 lbs. per hr.

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Fruits	*Current Practices*	*Developments in Mechanization*	*Statistics**
Cherries Red Tart Sweet	Tree shaking and catching are replacing the conventional hand-picking. Bulk handling is increasing. Water haul is still experimental-and may always be limited to certain localities.	Techniques with shakers are being refined to recommendations to length and vigor of shake (3, 24) to select only ripe red, tart, cherries. Sweet cherries for maraschinos are less successful.	50,000 A. Cost of shaker-collector $4,000 picking mechanically ½c lb. 1,-200 to 1,500 lbs. per hr. for four-man team. By hand 2½c per lb.
Grapes Concord Muscadine Seedless	Grapes are pruned and harvested by hand.	The long cluster stems in the Calif. grapes have allowed the beginnings of an experimental harvester (23) which clips bunches of grapes hanging from a curtain of vine. For Concords cutter bar is replaced by a vibrating spoke-wheel which shakes grapes into collector-conveyor. Similar progress in using shake-Harvesting is reported of Muscadines (13).	400,000 A. including grapes for wines. Hand labor 1½c per lb.
Citrus	All fruits are hand picked.	Three techniques are being investigated (11) for harvesting citrus fruits, shaking the trees a series of augers or screws to twist the fruit loose, and mechanical flails to dislodge the fruit by striking it on the stem.	500,000 A.
Figs for drying	Figs for drying are allowed to ripen and fall to the ground. They are picked up at frequent intervals.	Several mechanical devices are available to pick up figs for drying (35). Orchards must be kept level.	18,000 A.
Olives		A crash program is being conducted (23, 34) to test new mechanical devices for the industry (36) and to speed current research on tree shaking.	30,000 A.
Peaches & Pears	Soft fruits are picked by hand.	Some indication that the firmer varieties of pears may some day be harvested by tree-shaking. Also progress in picking peaches green and riping them in storage, may allow new techniques to be used. Otherwise research (23, 3) indicates that mechanical harvest is not imminent.	150,000 A.
Plums and Prunes	Prunes for drying are allowed to fall or the tree may be shaken. Prunes are picked up regularly. Plums are hand picked.	Shaking devices, shaking and catching frames, (23, 28, 29, 30, 31, 32) are being used. Also new machines to pick up prunes are in use (35). Shaking equipment may also be used on plums (5) however, they have not been found successful on Damsons.	125,000 A cost of hand picking 2c of machine picking ½c lb.
Strawberries	Strawberries are picked by hand. Caps of strawberries for processing are removed by hand.	A picker in sitting position straddling a row can pick twice as much. Four experimental sleds are under test (37).	50,000 A. Hand labor 4c lb.

* The acreage figure in all cases is a rounded estimate of the proportion of the crop that is used for processing. The figure is not a real one, since in some instances a single orchard or a single field may supply both the fresh and the processed market. But with the coming of mechanical harvest, the figures will serve to show the size of the impact of mechanization on the processed foods industry.

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The Changing Transportation Scene

CANNED AND GLASSED FOODS TRANSPORTATION

By Ross E. Jones

Vice president—Distribution, H. J. Heinz Company, Pittsburgh, Pa.

During the past decade there have been many significant changes within the transportation industry. Research and development efforts by the transportation companies and requests from their customers have produced better and more efficient service.

Within this same time span, the growth of the processed food industry has been tremendous. The demand for convenience foods has multiplied. Physical evidence of the changes required to meet the consumers' demands may be seen in the modern neighborhood shopping centers everywhere in the United States. Processed food products are one of the most important sources of revenues for all types of transportation carriers because of the volume to be transported and the stability of the food industry.

Changes Come Rapidly

It is important that those responsible for the physical distribution function of their company be properly informed of any changes in this area so that it can be determined if such adjustments are feasible. There is a wide range of data which must be closely observed; for example, legislative changes, new physical distribution systems, transportation pricing, and transportation methods.

At the present time there are two areas of change which may in the future affect the physical distribution activities of all food manufacturers. The first of these is concerned with transportation regulations and the second one deals with physical movement of merchandise.

The transportation industry has been federally controlled since the original act to regulate commerce was passed on February 4, 1887. In 1935, this control was extended to include motor carriers. Recently, the Interstate Commerce Commission, transportation officials, and representatives of the shipping industry have devoted considerable time and effort towards modifying certain sections of the Act. It is generally accepted by most transportation executives that some modifications of the Act are necessary to improve and strengthen our national transportation system.

Not All Are Improvements

Change without improvement, however, is not progress and should be avoided. Change which is regressive should not be permitted and must be defended against. An example of this type of undesirable change has appeared in HR Bill 1824 which proposes among other things the repeal of Section 203 (b)(6) of the Interstate Commerce Commission Act. This section excludes motor vehicles used in carrying livestock, fish, and agricultural commodities from federal control except for safety regulations. It is often referred to as the Agricultural Exemption.

After serious consideration, the major food companies have taken a united stand in opposing this portion of HR Bill 1824. The Agricultural Exemption is unusual in that it benefits everyone including the farmer, the food processor, and the ultimate consumer. Agricultural commodities must be moved at the peak of their maturity so that the consumers may enjoy top quality and flavor of products. Based on the experience of the major canners, it would be impossible to handle the seasonal and variable movement of such products from the fields to the processing plants by the use of regulated carriers. Undoubtedly, there are some movements of vegetables and produce which are not in accordance with the "spirit" of the Agricultural Exemption but it is believed by many that specific legislative changes can be made in the Act to eliminate these abuses.

Another area of interest to the food processors as well as their customers is the handling of finished products in unit loads. The history of unit handling of food products is long but it is still in the development stage.

Unit Loads Are Coming

Among the many advantages listed for this method of shipping are:

1. Savings in handling costs
2. Reduced damage in transit
3. The elimination of pilferage
4. Incentive freight rates
5. Increased storage efficiency
6. Improved utilization of transportation equipment
7. Greater utilization of dock area

While the operation of a unit load materials handling system involves many problems, the transportation carriers have been cooperative in furnishing functional equipment. The rail carriers have in service several hundred insulated box cars equipped with special loading devices which divide and secure the loading. These cars have wide doors and reinforced floors which permit the use of heavy fork lift trucks and pul-pac machines in the cars.

The motor carriers have also designed their trailer equipment so that these heavy materials handling machines can be employed during the loading and unloading operations. The door frames on the trailers have also been modified for ease of entry and plastic panels have been installed in the roofs of the trailers enabling the fork lift truck operator to observe his loading operations more carefully.

As Systems Are Devised

Through several traffic organizations such as the Canned Goods Shippers Conference and the Traffic Committee of the Grocery Manufacturers of America, Inc., shippers and receivers are meeting together to work out mutual problems regarding this unit load method of operation.

At this time no definite recommendations have been made by the various groups studying these problems but it is anticipated, after further study and more experimental shipments, that positive practices for unit load operations will be developed and expanded within the processed food industry.

PROCESSED DRY FOODS TRANSPORTATION

By William McArthur
Vice president—Transportation, The Pillsbury Co., Minneapolis, Minn.

Without any knowledge of what will be said in regard to the progress and problems, transportationwide, in the canned and frozen food areas it is my guess that the other articles in this series will be similar to what is about to be said in connection with dry foods.

Cake Mixes

In regard to the cake mix and flour traffic field the outstanding recent accomplishment has been the working out of a uniform rate structure for cake and frosting mixes which is now effective east of the Rocky Mountains. When the industry got underway some ten to twelve years ago, there was no system of rates worked out with any consideration to points of manufacture, competition or in fact, anything. The Cake Mix people inherited a hodge podge of rates, made entirely piecemeal but under a generic term, that by the stretch of one's imagination, could be said to cover such products.

Now a rate structure exists that gives all manufacturers the same rate level and gives each the advantage of his own geographical location.

The working out of a country-wide rate structure on a new product is an illuminating, challenging and frustrating experience. It is one few transportation men experience.

Distributing Warehouses

The transportation and distribution of food products has undergone radical changes in recent years. The establishment of the distributing transit warehouse, which more manufacturers are going into, has resulted in earth shaking changes as compared with the old established way of doing business. No one has escaped its headaches or those of automation in order and invoice handling.

All of these changes, however, come under the heading of progress and who is to argue that these changes are not for the good? Certainly all of us so engaged feel strongly that progress is being made but we likewise feel that much remains to be done.

Car Supply

We are all confronted with the fact that the old fashioned boxcar, the backbone of the railroads in the past, must be replaced. It has not kept pace with progress and it is no longer suitable for the carriage of food, nor is it even safe under the very stringent Food and Drug requirements under which we are both required and wish to operate. Any vehicle of carriage that endangers the sanitation of food products has outlived its usefulness, it has no place in the modern day necessities of food handling.

So every transportation man engaged in the movement of food, be it dry, wet, frozen or in nature's own cover, is and will be confronted with the problem of securing the best and most satisfactory equipment available for his own products whatever they may be.

It isn't that satisfactory equipment doesn't exist, the car builders have done a pretty good job of designing cars that are shock resistant, sanitary (or can be made so) and can be economically loaded. The unfortunate fact is that such cars cost upwards of $18,000 each and 350,000 of them would cost some 6 billion 300 million dollars, providing old fashioned third grade arithmetic still holds.

The fact remains that the answer to this problem is money, money that carriers do not have and manufacturers and customers are unwilling to provide. So the Food Traffic Manager will continue to fight the problem of inadequate and unsatisfactory car supply, not only next year but for many years to come.

Rail Service

Rail service will remain a problem. As long as one can remember railroads have, in the main, bragged about their service and speed, time and dependability were the high points.

The distributing warehouse idea was conceived in a utopian dream that warehouses should be so located that an order could be received this morning, processed, loaded, moved, set and ready for unloading tomorrow morning. No customer would be able to resist such service and such a set up would solve all problems including the well known "out of stock" one.

The fact that such an idea is impractical, impossible and in fact unnecessary on a national scale only accentuates what more and more of us are coming to realize, what we really need is a dependable service. When the time comes that we can tell our customers that orders received on certain days will be delivered on certain days, and never fail, then business will gear itself to that schedule and most of our problems in this field will disappear.

However, the carriers have their troubles and even though they want to give us what we want there are so many variables that the solution of this problem is far over the horizon.

Flour

Flour, a must staple in the food line, is found in every kitchen and will continue to be so found even though in lesser amounts. It will remain a factor in the whole scheme of food movement. Its problems are growing.

With the exception of the area east of Buffalo and Pittsburgh and north of the Potomac all grain and grain product rates are Commission prescribed as a result of over thirty years litigation. Many of these rates are again under litigation. Litigation stops voluntary solutions to rate problems.

The movement of grain and grain products under milling and storage in transit is a very complex matter and constantly changing crop conditions, customer demands and the necessity of fitting such movement into the changing patterns of distribution of other foods are sufficient to over tax the ingenuity of both carrier and shipper alike. Not content with just this problem, however, the Agricultural Exemption clause (which means the movement of grain by truck is not regulated), has created movements and problems that threaten the entire rate adjustment as it has been worked out and jeopardizes the location of every existing flour mill today.

Private Carriage

The transportation cost factor in the movement of food is too high in relation to other factors. It has doubled in the last fifteen years wheras many other factors have not. In spite of this, common carriers today find themselves in a tighter financial situation than at any time since the thirties and many are in serious trouble.

Inasmuch as every transportation man's primary concern is the welfare

this man works for you

At the Asgrow Research Center in Twin Falls, Idaho, an Asgrow plant breeder cross-pollinates a pea blossom—the first step in developing a new variety for the food-processing industry.

Plant scientists and technicians like this one at six other Asgrow research stations work the year around to provide you with better varieties and better seeds.

Here are some of their recent projects:

Snap Beans: **Harvester and Harvester C**

Broccoli: **Atlantic and Coastal**

Sweet Corn: **Merit**

Peas: **Green Bay and Freezer 69**

Ask your Asgrow representative about them the next time he calls.

Asgrow Seed Company

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In Texas: Asgrow Seed Company of Texas, San Antonio 11, Texas

of his own company, more and more are looking to private carriage as a means of offsetting their constantly increasing costs.

The modern day large food manufacturer with many plants, diversified products and distributing warehouses has endless opportunities to use his own truck. Dollars saved in transportation costs mean dollars in the Annual Report just as much as those from any othr source, and after all that is all that any of us are striving for.

Inasmuch as food moves in such tremendous volume it is reasonable to believe that movment by rail will never be fully replaced which puts the food transportation man in a tough spot. He must decide just how far he can go before he does such injury to common carriers that the repercussions will prove very costly.

There is no place for complacency in the food transportation picture, there is room only for hard, sincere and intelligent thinking by transportation men, of all kinds, for years to come.

U. S. food packers annually spend about $5 millions for the purchase of highway trucks and trailers, and expend an estimated $5 millions for renting the same. This is in addition to all equipment used by wholesalers, chains, etc., and doesn't include purchases made by public carriers or private trucking lines for the processed food industry.— *from Canner/Packer, Market Research Report 601.*

FROZEN FOODS TRANSPORTATION

By B. J. Murtha
Birds Eye Division, General Foods Corp., White Plains, N. Y.

In a business growing as steadily as the frozen food business, any article having to do with transportation of frozen foods could very well deal at length with each of many phases—rail and truck equipment, how to take temperatures, service and rates, distribution plans, customer preference, and buying practice. But perhaps the most timely subject right now is transportation temperatures.

All of us in the frozen food business have realized from the beginning that quality is one of our greatest selling tools. Tremendous effort is put into making certain that quality is built into every package. That quality will still be there when the housewife opens the package only if it is stored at 0° F. from the time it is packed until it is opened.

Heat Is Removed

Now what does it take to maintain 0° F. in transit? First, let's all agree that product is at 0° F. simply because sufficient heat has been taken out to bring the temperature down to zero. If more heat were removed, the temperature would be lower—but, it is an accepted principle that zero is adequate to maintain the quality of frozen foods. Now, then, the temperature of frozen foods will rise above zero only if heat is allowed to get back in.

Insulation, even eight inches of the best insulation, in general use in rail and truck equipment, can do no more than slow down the tendency of heat to get in. If insulation stopped the flow of heat completely, there would be no need for refrigeration inside the car or truck.

Therefore, the job of a *refrigeration unit* is to grab the heat that does get through the insulation, take it through the unit and send it back outside.

This is where floor racks, side racks, and air ducts enter the picture. No matter how good a refrigeration unit is, it cannot do its job if the cold air from the unit cannot circulate *freely* around the *entire* load—continuously and without interruption—picking up the heat, carrying it back and sending it back out again.

Frozen food cannot refrigerate itself. It stands defenseless against heat; and, for our purposes, any temperature above zero is heat—just as we stand defenseless against cold if we are not protected by clothing, shelter, and heating units.

Adequate Protection Required

Equipment capable of maintaining frozen foods at zero in transportation is available right now. Mechanically refrigerated rail cars do the job with ease. The only area in rail transportation that needs urgent attention, from a temperature standpoint, is the elimination of a few weak links in the refrigeration system that fail occasionally and cause breakdown of the system. The incidence of breakdown is small in comparison to the number of carloads shipped but there is room for improvement.

Truckers have equipment that can carry frozen foods across the entire country and deliver them at zero. In the desire to eliminate weight to allow greater payload or increased cubage, however, some truck operators may unwisely hedge on insulation, using four inches instead of the six that has been generally accepted as a safe minimum—and then expect the mechanical unit to combat successfully the 50% more heat that comes through. Result—the mechanical unit cannot handle the increased heat-load or it runs continuously and eventually breaks down from overwork.

Granted, insulations of greater efficiency than those now in general use, better methods of application, as well as length of haul, would influence to some extent how many inches of insulation would be considered a safe minimum.

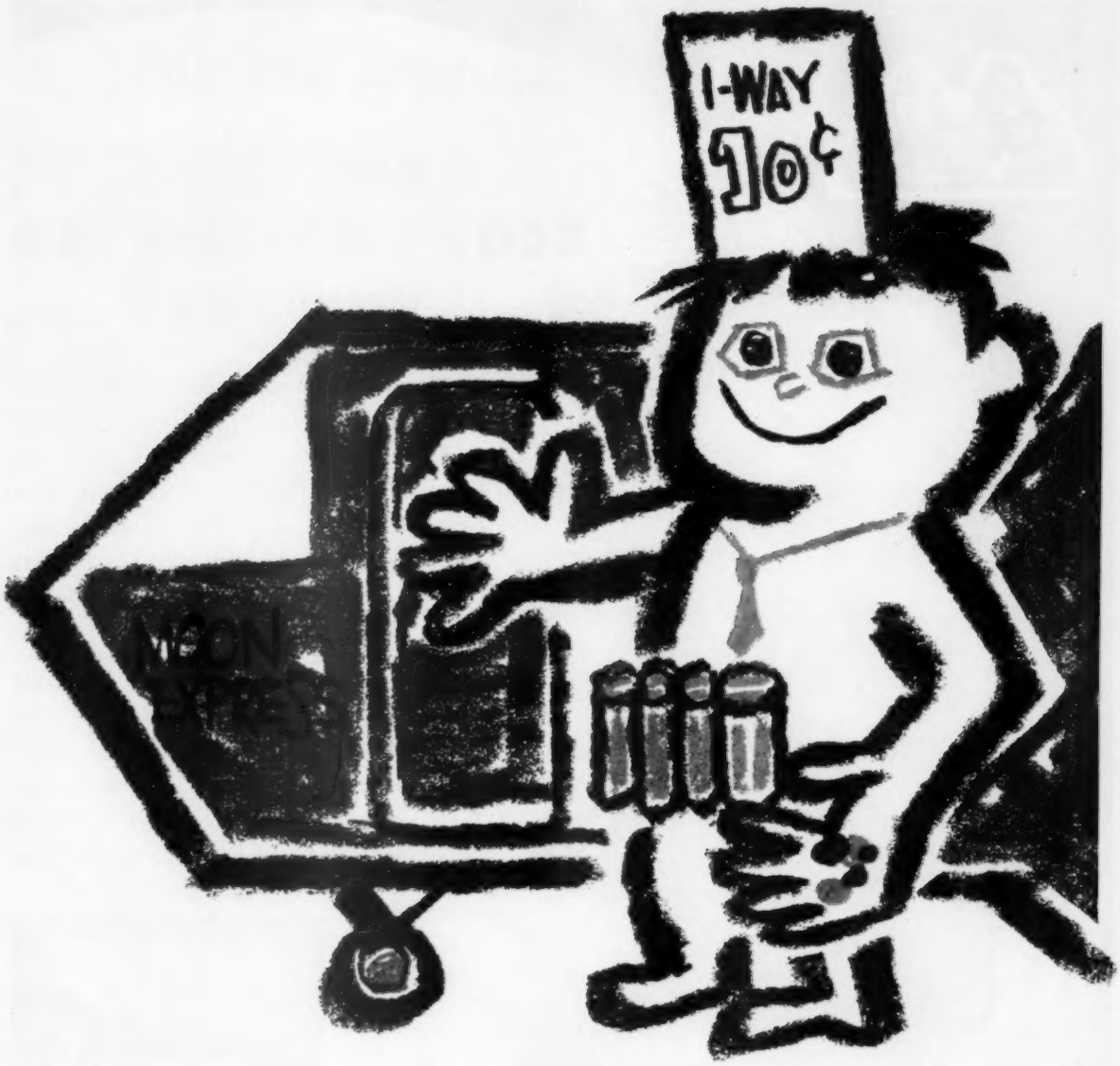
Air Flow

Other carriers, for various reasons, skimp on the depth of floor racks and side strips to the point where there is no real free flow of refrigerated air around the load. If there is no free flow, heat goes right into the product.

Mechanical units of lesser capacity is another area where an unwise compromise can be made—which is like sending a boy to do a man's job.

In those States where the code formulated by the Association of Food and Drug Officials of the United States—AFDOUS—is enacted into law, the goal of constant zero on which we have been working for so long will be mandatory. We hope these laws, when enacted, will allow a reasonable tolerance, but this would probably be for only an interim period.

If we are to prosper and grow, we cannot compromise on the quality we put into the package—or the protection we give that quality!



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Thrifty shippers of California's premium quality foods have learned, from practical experience, that Isbrandtsen's fast, frequent and direct cargo service to Puerto Rico and other East Coast ports is as economical as it is dependable. Isbrandtsen's fleet of 'Round-World cargo liners carry an ever-increasing amount of the Golden State's agricultural bounty.

Years of experience in ports around the world have provided a degree of "know-how" that insures efficiency, coupled with economy. That's why more and more California shippers of fine fruits, vegetables, rice and other grains, depend on Isbrandtsen direct service to Puerto Rico.

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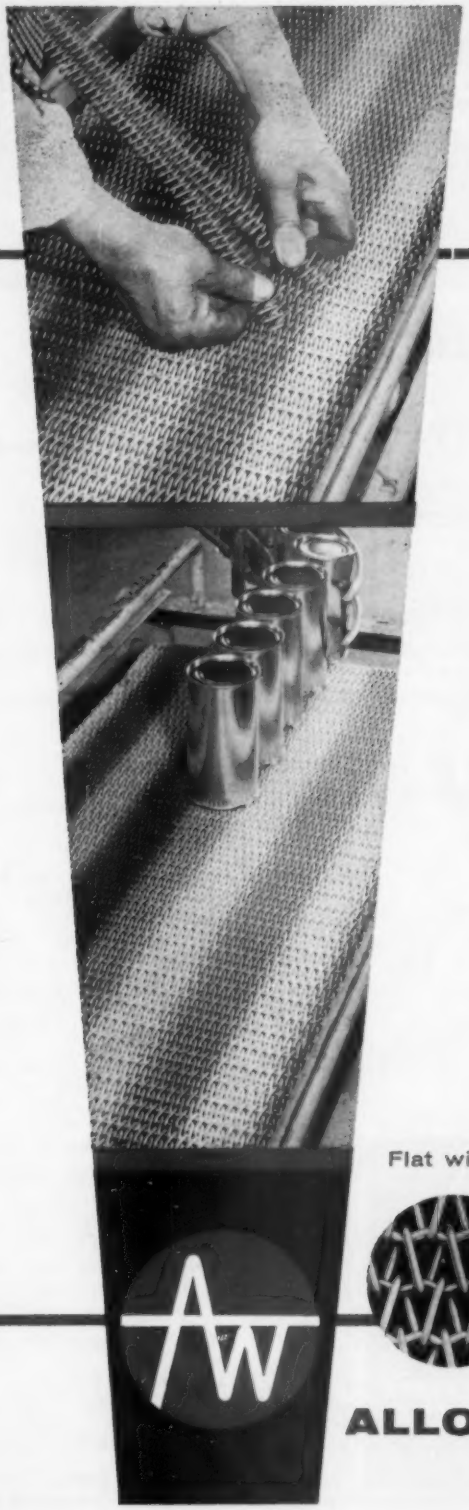
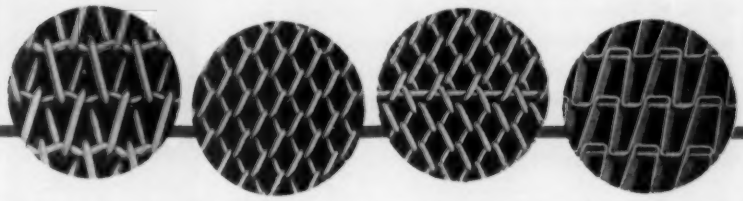


. . . as proved in over 3000 installations throughout the West!

Why does a packer's least expensive major plant equipment—the conveyor system—often cause the most costly production delays? One cause, of course, lies in the design of the conveyor belt itself! You can reduce this conveyor system downtime to an absolute minimum by selecting an Alloy Wire Belt that is precisely fabricated to fit your particular installation. You can depend on this continuous process belt to fulfill your requirements—either standard or extreme conditions of corrosion, load and temperature (ranging from quick freezing applications to 2100 degree Fahrenheit for copper-brazing)

Alloy Wire Belt Company is the only conveyor belt manufacturer with Pacific Coast Headquarters and provides faster, more dependable delivery and service. In addition, custom engineering design standards are guaranteed—and at truly off-the-shelf prices! If you have or anticipate a conveyor belt problem, call or write Alloy Wire Belt Company, today!

Flat wire or round wire fabricated to specifications



ALLOY WIRE BELT COMPANY

210 PHELAN AVENUE, SAN JOSE, CALIFORNIA

CYpress 4-1155

Manufacturers Representatives

This is a listing of Western jobbers and distributors of food packing and processing equipment. Branch offices of equipment manufacturers are included if these offices distribute products of other manufacturers.

California

Sierra Package Eqt. Co., Bell, Calif.
F. H. Langsenkamp Company
F. L. Burt Company

Peterson & Peterson, 2705 Tenth Street, Berkeley, Calif.
Waukesha Foundry Company
Reliance Electric Mfg. Co.
Proveda Mfg. Company, Inc.
Metzgar Conveyor Company

Sumner E. Perkins Company, 1605 Solano Avenue, Berkeley 7, Calif.
Adolph Gottscho, Inc.
Crompton & Knowles Pkfg. Corp.
Island Equipment Corp.

Fred Todt Company, 866 Burlway Road, Burlingame, Calif.
(See Seattle, Wash.)

Baron Industries, 241 W. Avenue 26, Los Angeles 31, Calif.
Fostoria Corporation

Cal-State Dist., Inc., 8928 South Figueroa Street, Los Angeles 3, Calif.
Heller Roberts Mfg. Co.
Ideal Stencil Machine Co.
International Staple & Mach. Co.
Weber Addressing Machine Co.

Fernholtz Machinery Co., 8468 Melrose Place, Los Angeles 46, Calif.
Robbins & Myers

King Sales & Engineering Co., 3711 South Santa Fe Avenue, Los Angeles, Calif.
(See San Francisco)

John Lentz Company, 1818 East Olympic Blvd., Los Angeles 21, Calif.
Groen Mfg. Company
Lee Metal Products Company, Inc.

Watts B. King Company, 3404 N. Figueroa Street, Los Angeles 65, Calif.
Berlin-Chapman Company
Chisholm-Ryder Co. of Pa.
The Cog Company
Doughboy Indus., Inc.
Elgin Mfg. Company
J. L. Ferguson Company
Gisholt Machine Company
Kiwi Coders Corporation
Labelette Company
Lectromatic Devices
Sellers Injector Corporation
Trans-Mation Systems
U. S. Bottlers Machinery Company
Weigh Right Automatic Scale
Wrap-Ade Machine Company

Production Equipment Co., 1505 West Jefferson Blvd., Los Angeles, Calif.
MRM Company, Inc.
Pack-Rite Machine Company
Parson Automatic Scales

Fred Todt Company, 2021 South Hill Street, Los Angeles 7, Calif.
(See Seattle, Wash.)

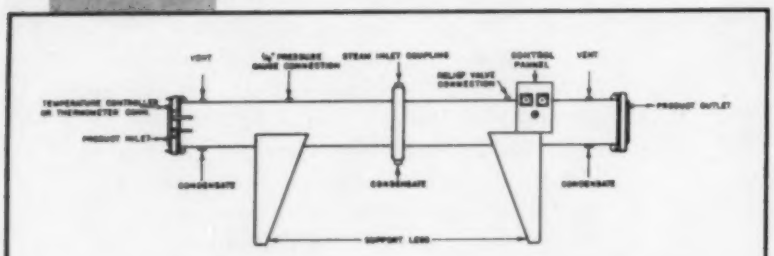
Krier Engrg. and Sales, R.R. #2, Box 961, Morrow Road, Modesto, Calif.
Scott Viner Company
Tawco Product
J. R. Kovar Mfg. Company

Allen Mchry. and Eqt. Co., 600 16th Street, Oakland 12, Calif.
Clayton Mfg. Company
Labelette Mfg. Co.

Barth Engineering Company, 3871 Piedmont Avenue, Oakland 11, Calif.
Blaw-Knox Company

James Q. Leavitt Company, 410—25th Street, Oakland, Calif.
ABC Package Machine Corp.
Ayars Machine Company
Burt Machine Company
Chisholm-Ryder Company
CESCO
Commercial Mfg. and Supply Company
Dunkley Equipment Company

KRENZ HE heaters set the standard for food processing industry



KRENZ shell and tube heaters provide:

- Continuous condensate removal
- Stainless steel product-contact surfaces
- Quick-opening heads for easy cleaning
- Complete sanitary design

ACCESSORIES

- Vacuum system
- Instrumentation
- Recirculation system

For continuous high velocity flow of heat sensitive products, KRENZ HE-Series heat exchangers and accessories are unsurpassed! Available in 10 sizes, for pre-heating and after-heating applications. Regulated steam rates assure automatic temperature control, and vacuum protective systems prevent product burning. These and many other advantages are yours when you specify KRENZ HE-Heaters.

When exacting conditions must be met, rely on KRENZ . . . with confidence! Put KRENZ' half-century of experience to work for you.

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For ALL Food Processing Equipment

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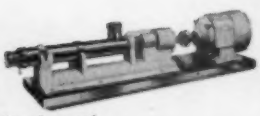
"Pumps anything that Flows"



Potato Salad/Ground Meat/Marshmallows/Horse Radish/ You name it, HELIFERN* pumps it. Easy to clean/install/and service/ bacteria free/

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Sifting machines, for screening, sifting or separating dry moist, or liquid materials. Portable, sturdy simple. Low maintenance costs, enormous capacity.

Magnetic Separators

For scrap metal removal—both electronic and permanent magnet type. For wet or dry ferro-filters—for liquid suspensions at all viscosities and for powdered and granular materials.

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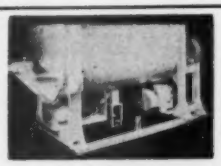
Stainless Steel Vessels and Tanks. Mixing and Grinding Jars.

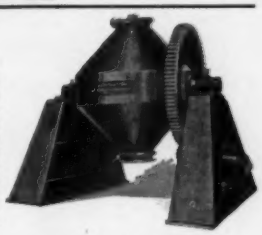


MIXERS

Horizontal stationary mixers for bakery mixes and other dry or wet materials — also portable mixers for vertical tanks. Batch or continuous operation. All sizes, from laboratory to large capacity. Special units for special uses.

CONICAL BLENDERS

Conical Dry Blenders will rapidly and efficiently blend any free flowing solid ranging in particle size from very fine mesh powder to large pebbles. They range in capacity from 25 lbs. to 10,000 lbs. for materials having densities of from 20 lbs. per cubic foot to 100 lbs. and over per cubic foot.



MIXERS (PORTABLE)

Complete range of sizes, from laboratory to large tank agitators. For mixing juices, salad dressings, mayonnaise, syrups, beverages. Also a full line of stationary large-capacity mixers.

SCREENS

OVERSTROM vibrating screens (not illustrated) for screening or de-watering dried or fresh fruits, pulps, juices, etc. Wide range of stainless steel screens. Single, double, triple deck. Used by leading food processors.

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- Commercial Mfg. & Supply Co.
- Fabreeka Products Company
- Girdler Process Equipment Div.
- Huntley Mfg. Co.
- Magnuson Engineers, Inc.
- George Olney Co.
- A. K. Robins & Co., Inc.
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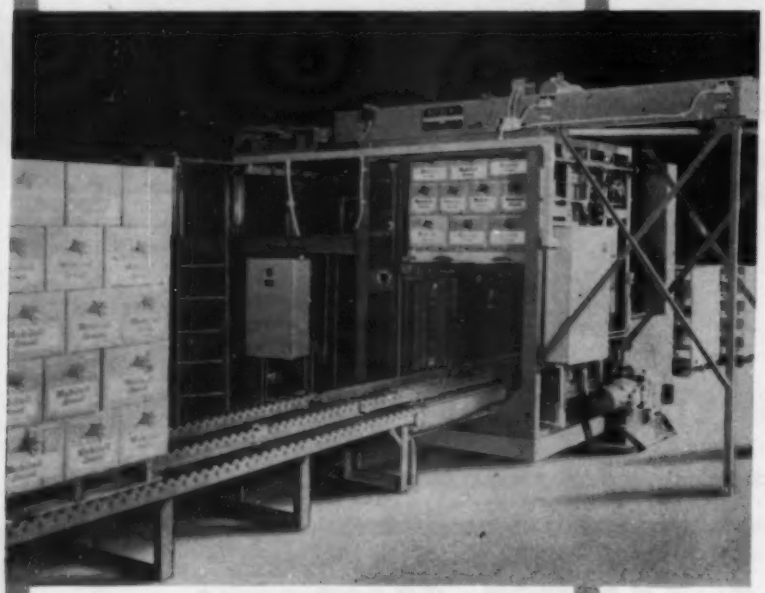

This machine is one of a complete line of Mathews Automatic and Semi-Automatic Pallet Loaders.

• Whatever your conveying problem might be—if it involves package handling—Mathews will build the equipment to do the job best for you.

You'll get a complete conveyer service, from proposal engineering through installation, and equipment that will deliver outstanding performance.

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CANADIAN DIVISION ..... MATHEWS CONVEYER COMPANY, LTD.
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Over Fifty Years of Leadership in Mechanized Handling

MATHEWS

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(Continued from page 106D)

Fabreka Products Company
A. T. Ferrell & Company
Girdler Processing Eqt. Div.
Huntley Manufacturing Company
Illumitronic Systems
Industrial Market Eqt. Company
Magnuson Engineers
Lee Metal Products Company
A. B. McLauchlin Company
Mix-Mor, Inc.
George Olney Co.
Pacific Wire Works
Reid Boiler Works
A. K. Robins & Company
Simplicity Engrg. Company
Taylor Instrument Co.
Urschel Labs.
Waukesha Foundry Company
F. H. Langsenkamp Company

Phillips Assoc., 6003 Market Street, Oakland 8, Calif.

Bell-Mark Corporation
Ciliotta Machine Company
E. D. Coddington Mfg. Company
Conselidate Pkg. Mchry. Corp.
R. G. Haskins Company
Jacob House & Son
The Karl Kiefer Machine Co.
Kalix-Dupuy, Haring Equipment Corp.
James H. Mathews and Co., Inc.
Miller Wrapping & Sealing Mach. Co.
Peters Machinery Company
Potdevin Machine Co.
Schroeder Machine Corp.
Specialty Engineering Company

General Industrial Eqt. Company, 4078 Fabian Way, Palo Alta, Calif.

Niagara Blower Company

Philip E. Hartman Company, 515 Standish Street, Redwood City, Calif.

Belt Ice Corp.
Ashley Machine Company
Benruth Company

Acme Equipment Company, 801 Minnesota Street, San Francisco, Calif.

Standard Conveyor

Food Equipment & Supply Co., 210 Mississippi, San Francisco, Calif.

Berlin-Chapman Company
Brown Filling Machine Co.
Chisholm-Ryder Co. of Pa., NewWay Div.
Cog Corporation
Doughboy Indus.
J. L. Ferguson Company
Filler Machine Co., Inc.
Gisholt Machine Company
Kiwi Coders Corp.
Lectromatic Devices, Inc.
Lee Assoc., Inc.
MacArnet Engineer Company
Pannier Corp.
SundStrand Corporation
Tele-Sonic Packing Company
U. S. Bottlers Machinery Co.
Weigh Right Automatic Scale

Hamerslag Equipment Co., 110 Freeway Blvd., So. San Francisco, Calif.

Aerol Company, Inc.
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Tough, Versatile, Pure—meets the critical needs of food processing

Here's a new cannery grease that can really take it, yet leaves no trace of odor or taste.

Chevron Cannery Grease 550 resists water, salt, detergents and food acids. It will not turn rancid, harden or deteriorate in service, and can withstand steam temperatures well over 350 degrees F.

This light blonde-colored grease offers ideal lubrication for all food handling and processing equipment. It's soft, pumpable, easy-to-handle and can be used with complete safety throughout your plant . . . even under the most severe operating conditions.

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CONCRETE FLOOR SURFACE PROTECTANT

HYCON® 2-TO-1

CUT MAINTENANCE COST

CONTROL CORROSION

INCREASE SAFETY

Plus these other features

HYCON 2-TO-1 is a proven surfacing material which provides concrete floors with an extremely tough, long-wearing protective coating. HYCON 2-TO-1 is impervious to the floor destroying substances found in most plants, such as acids, chemicals, greases, detergents, etc.

Only ⅛" in thickness and easily applied, HYCON 2-TO-1 is many times stronger than concrete, able to withstand the gruelling punishment of fork trucks, dollies, and similar heavy equipment. Corroded, pitted, and chipped floors can be economically resurfaced with HYCON 2-TO-1. Available in a variety of colors with either smooth or skid-resistent textures.

Work may be done by your own plant personnel or by an experienced HYCON contractor.

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Pencil Hardness	2H
Tabor abrasion resistance: filled coating	500 cycles/mil for CS 17 wheel 1000 GM load
Resistance to heat and cold: filled coating on mild steel cycled from 212°F to minus 100°F	No effect (i.e. no cracking, flaking, loss of adhesion, or other deterioration)
Compressive Strength 2 inch cube (cured 7 days at 70-75°F)	9000 psi (.2% offset)

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HYCON solvent-free Epoxies . . the ultimate in surface protection

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(Continued from page 106F)

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Crown Controls Co., Inc.
Hollywood Plastics, Inc.
The Kelley Company, Inc.
Magline, Inc.
Speedways Conveyors, Inc.
Yale and Towne Mfg. Co., Inc.
Stokvis-Multition Corp.
Penco Metal Products
Nestier Corp.
Lewis-Shepard Products, Inc.

King Sales & Engrg. Co., 441 Folsom Street, San Francisco, Calif.

Battle Creek Pkg. Machs., Inc.
Burt Machine Company
Chisholm-Ryder Co. of Pa.
Container Eqt. Corporation
Adolph Gottscho, Inc.
Pfaudler Sales Company

T. R. Mantes Company, 236 Fremont Street, San Francisco, Calif.

Exact Weight Scale

Robert H. Pulford Company, 24 California Street, San Francisco, Calif.

W. J. Fitzpatrick Company
Heil Dryers
W. J. Fitzpatrick Company—Heil Dryers

FMC Corp., Canning Machinery Div., P.O. Box 1120, San Jose, Calif.

CESCO
Elliot Mfg. Company, Inc.
A. T. Ferrell & Company
Key Equipment Company
Lee Metal Products Company
F. B. Pease Company
Scott Viner Company
Taylor Instruments Company
Urschel Labs., Inc.

Nu-Way Harvester Company, 1240 North 13th Street, San Jose 10, Calif.

H. D. Hume Company
Holland Transplanter Company
Mechanical Transplanter Company

C. W. Miller, 16089 Via Alamitos, San Lorezo, Calif.

Biner-Ellison Machinery Co.

FMC Corp., 1009½ South Fair Oaks, So. Pasadena, Calif.

(See San Jose, California)

Refrigeration Machine Corp., 1024 East Anaheim Blvd., Wilmington, Calif.

Sealube Company
Vilter Manufacturing Company

Colorado

Hack Engineering Company, 124 Wazee Market, Denver, Colo.

Mathews Conveyor Company

Halsell Brokerage Company, 3101 Walnut Street, Denver, Colo.

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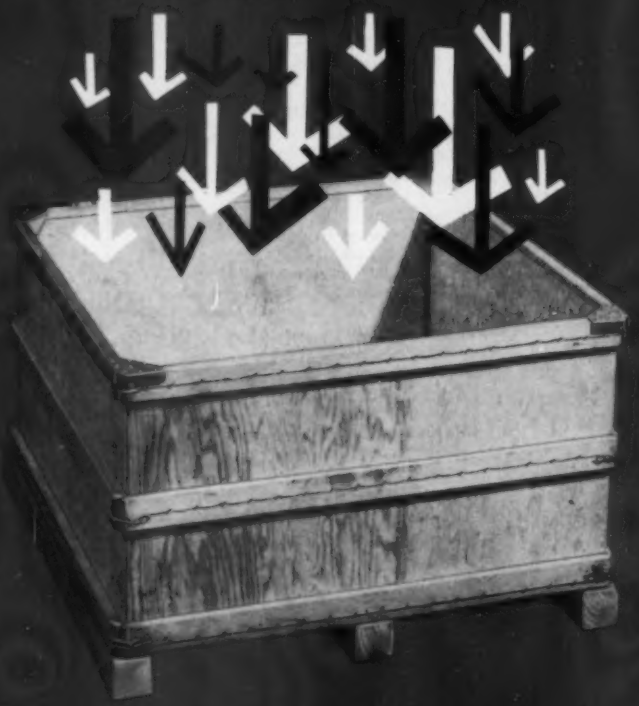

The Boom in Canned Convenience Foods Is Still Going Strong.

By ELVERTON B. STARK, *Editor Canner/Packer*

Production and consumption of convenience foods—products with built-in maid service—continue to grow more rapidly than the volume of more conventional processed items, according to the best available data. And while gains are perhaps more spectacular in the frozen and dry food areas, canned convenience foods are playing important roles in this development.

This is evidenced by can shipment figures compiled by U.S. Dept. of Commerce. In the period from 1954 through 1960, shipments of cans for fruits, vegetables and juices increased by 15%. Shipments for milk, fish, meat, poultry, lard and shortening dropped off 9%. But shipments for "other foods"—including such convenience products as soups, nationality dishes and baby foods—showed an impressive gain of nearly 35%.

It is logical for canned convenience items to show a strong forward trend, because they were the first in the convenience field. Canned soup was undoubtedly the earliest major preserved item in which a variety of materials was combined to give a product different from what Nature supplies, and thus to eliminate work previously done only in the kitchen.

The aspect of canned convenience products which still continues to be surprising to many, however, is their usage as basic ingredients in still more elaborate dishes which the housewife or the restaurant operator prepares. Those who practice the culinary arts in many instances show themselves determined to show their originality, even when they employ specially-prepared dishes. Thus mushroom, celery and tomato soups are widely used as sauces to be combined with other materials, fruit cocktail is most commonly eaten in gelatin, spaghetti and meat or fish packs are frequently combined, and so on.

Consumption of convenience canned foods continues to gain, but there is still much room for added business. The 1960 Consolidated Consumer Analysis of 21 U.S. markets, for example, shows that in that year in those areas only 22% of the housewives were using dessert toppings in aerosol cans to any degree at all, that only the same percentage were buying canned dog foods, and that even such a long-established convenience canned product as fruit cocktail was purchased by only 83% of those interviewed.

No one knows exactly how much canned convenience food is produced annually in the United States. In 1960, however, this journal estimates the production of some of the products at about these levels (millions of cases, largely 24/2s):

Soups	60.9
Prepared dry beans	36.0
Baby foods	36.0
Spaghetti products	14.8
Sauerkraut	6.8
Chinese foods	5.5
Chili con carne	3.0
Meat stews	2.4
Corned beef hash	1.4
TOTAL OF ABOVE	166.8

This is approximately half again as much as the U.S. output of all canned and glassed tomato products, including juice, solid pack tomatoes, catsup, chili sauce, paste, puree, sauce, and such miscellaneous items as cocktail sauce, pizza sauce, etc.

U.S. Honey Production Is Up—Stocks Down

The age-old industry of honey production continues to supply a major share of sweetening material to the United States today. Indeed, the 1960 pack was second only to the record output of 1952 in proportions.

Last year the nation's bees turned a wide variety of nectars into over 253 million lbs. of honey, up from less than 248 millions in 1959. By geographic areas, the crops compared as follows (thousands of lbs.), according to estimates provided USDA by local sources:

AREA	1959	1960
North Atlantic	17,366	19,722
East North Central	56,396	50,936
West North Central	63,454	54,738
South Atlantic	30,034	37,435
South Central†	28,625	30,323
Western*	51,648	60,200
U.S.A.	247,523	253,354

†Not including Puerto Rico.
*Not including Hawaii.

Despite the greater output, September 15 stocks were estimated at only

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Special Reports

94 million lbs., against 101 millions a year before and 108 millions two years earlier. Increased use of the sweet for food manufacturing purposes (bakery, breakfast foods, preserves, salad dressings, confectionery, etc.) contributed to the relatively small stocks, as did strong demand for packaged honey at the retail level.

Increase in Frozen Poultry Pack

Best available statistics indicate that the 1960 U. S. pack of frozen poultry —excluding convenience items like pot pies—reached the all-time high mark of 1,267,000,000 lbs. This made poultry the third largest frozen pack, exceeded only by vegetables and by the prepared or convenience products.

Turkeys continue to be the variety of poultry most commonly frozen. In 1960, 84% of all turkeys slaughtered under federal inspection went to market in frozen form. Chickens ranked second in tonnage, although only 11% of the U. S. chickens were sold frozen last year. Practically 100% of the ducks and other commercially-sold game were frozen, but the tonnage remained small.

The U. S. output of frozen turkeys increased from 667 million lbs. in 1958 to 742 millions in 1959 and 796 millions in 1960.

Frozen chicken packs went up from 378 millions lbs. three seasons ago to 421 millions two years back, and to 448 millions last year.

Frozen ducks and other game declined moderately in output, from 29 million lbs. in 1958 to 25 millions in 1959 and to 23 millions in 1960.

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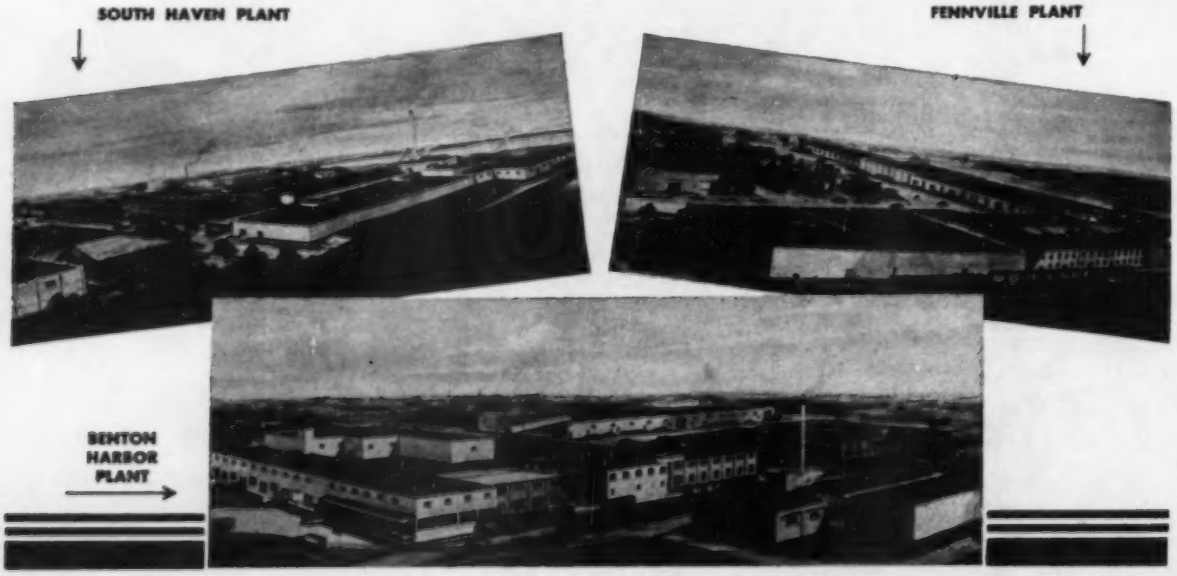

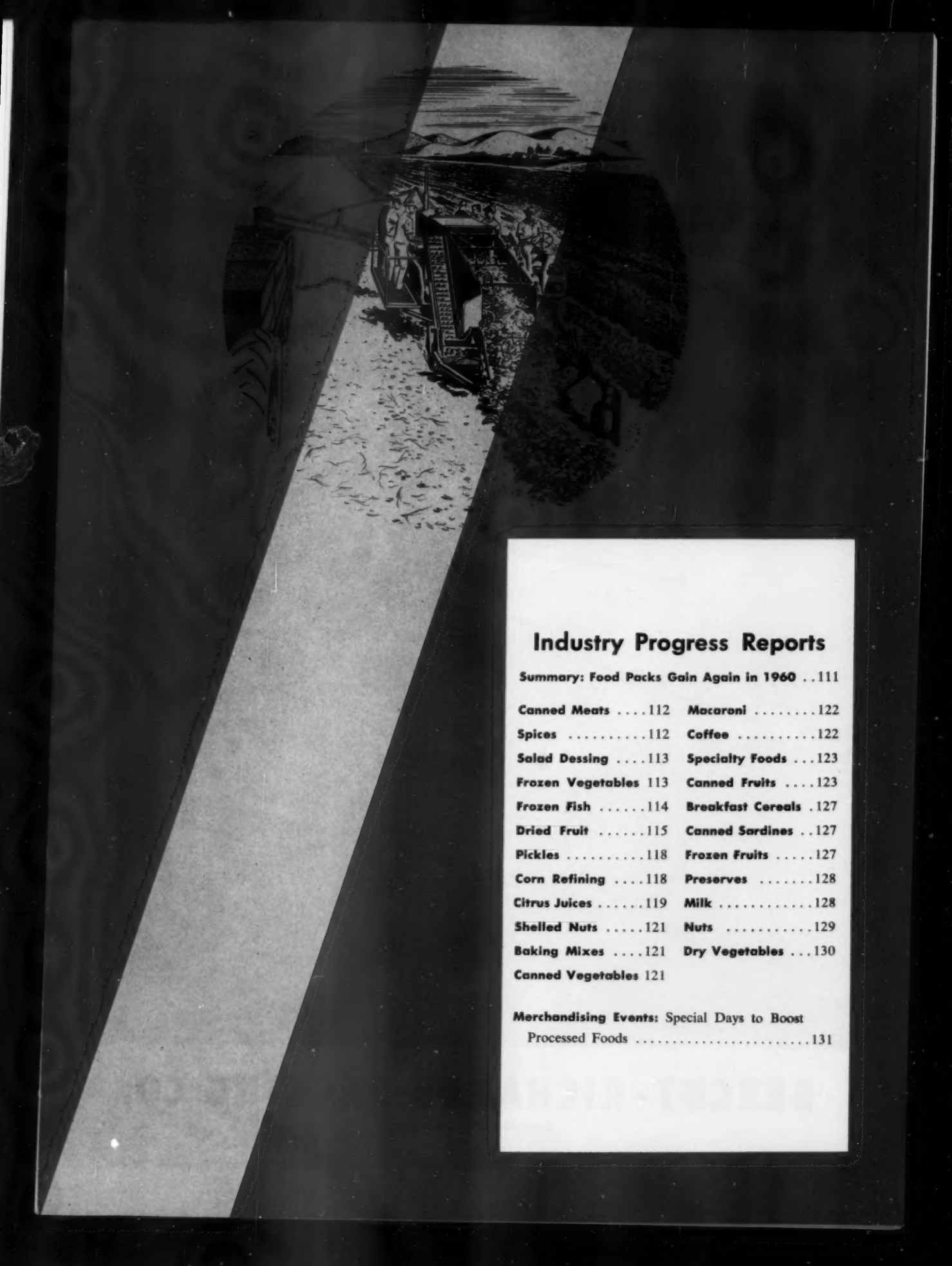

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Sacramento, California

Food Packs Gain Again in 1960

By ELVERTON B. STARK, Editor

The processed food industries of the United States—packers of canned, dry, frozen and glassed foods—produced about 85.8 billion lbs. of products in 1960, a modest increase over the 84.8 billions of 1959 (see table on this page).

The pack was the largest on record. While production of dry products declined slightly, the moderate gain in the pack in cans and glass, and the considerable jump in frozen production, were enough to make the 1960 total biggest in history.

Canned Foods Up Slightly

The U.S. 1960 canned food pack was 829 millions cases, compared with 819 millions in 1959. In thousands of cases, production of major categories was as follows in the two seasons:

Item	1959	1960
SEASONAL FOODS		
Fruits (2½s)	102,513	101,718
Vegetables (2s)	189,280	200,289
Juices (2s)	112,600	112,810
ALL OTHER		
Babyfood (2s)	35,000	36,000
Seafoods (var.)	23,222	24,730
Meats (48/1-lb.)	32,600	34,100
Milk (48/14½z)	53,510	51,540
Chinese (Var.)	5,000	5,500
Spaghetti (Var.)	15,230	14,840
Poultry (24/1-lb.)	1,920	2,690
Soups (2s)	58,000	60,900
Non-seas. Vegs (2s)	77,039	75,059
Petfoods (48/1-lb.)	41,760	42,690
Coffee	44,200	42,800
Shortening, lard	27,400	23,300
TOTALS	819,274	828,966

Dry Production Unchanged

While packs of individual classes of dry foods varied considerably in 1960 and 1959, the total output of such commodities was approximately the same in the two seasons.

By principal classes, the output in the two years compared as follows, in thousands of tons:

Item	1959	1960
SEASONAL FOODS		
Fruits	447	399
Nuts	1,067	1,157
Vegetables	1,263	1,163
ALL OTHER		
Cocoa imports	242	275
Coffee imports	1,538	1,460
Tea imports	55	58
Breakfast foods	845	855
Baking mixes	1,052	968
Corn, potato chips	283	310
Corn sweeteners	434	411
Corn starch	1,097	1,100
Eggs	27	23
Bak. powder, yeast	180	180
Macaroni products	470	470
Milk products	963	1,014
Spices (incomplete)	53	53
Sugar	9,262	9,323
Pet foods	790	790
Puddings, flavors, pectin	245	245
TOTALS	20,313	20,254

Frozen Pack Sets Record

Led by the biggest packs of vegetables, juices, poultry and convenience foods in history, the U.S. frozen food business set an all-time record in production in 1960, with a total pack of over 7.5 billion lbs. This compares with 6.9 billion lbs. in 1959 and 6.6 billions in 1958.

By principal classes, the 1960 and 1959 packs were as follows (millions of lbs.):

Item	1959	1960
SEASONAL FOODS		
Fruits	617.6	659.7
Vegs. except potatoes	1,255.6	1,407.2
Citrus juices	864.8	940.0
Other juices, ades	148.0	150.0
ALL OTHER		
Eggs	435.7	362.4
Fish	336.6	328.7
Meats	400.0	400.0
Poultry	1,188.0	1,267.0
Convenience foods	1,700.0	2,000.0
TOTALS	6,946.3	7,515.0

Glass Packs Gain

U.S. production of foods in glass got off to a good start in early 1960, slowed down in midseason, then picked up speed in the late months to show an over-all pack for the year of 372 million cases, up over the previous season for the ninth consecutive year.

By principal categories, the output in the two years compared as follows (millions of cases, largely of 24/lbs. or 24/pts.):

Item	1959	1960
FRUITS—VEGETABLES—NUTS		
Maraschino cherries	2.1	1.6
Fruits	7.9	8.5
Juices	19.7	21.0
Green olives	6.5	6.0
Peanut butter	10.3	10.5
Pickles	40.0	40.5
Preserves	35.0	35.0
Tomato products	25.3	31.9
Vegetables	10.2	10.0
ALL OTHER		
Baby foods	39.0	40.0
Condiments	13.5	14.4
Extracts	2.1	2.0
Honey	10.3	10.8
Meat, poultry	2.5	2.5
Coffee	8.0	9.0
Salad dressings	44.8	45.5
Syrups	14.6	14.5
Vegetable oils	8.8	8.8
Vinegar	10.0	10.0
Miscellaneous	52.4	49.5
TOTALS	363.0	372.0

Where to Find

REVIEWS: Reports by industry leaders follow. See section frontispiece, page 109, for list of articles.

STATISTICS: Crop, production and distribution data are in the Statistical Section. See frontispiece, page 133, for details.

EQUIPMENT, SUPPLIES: For list of suppliers and classified buyers' guide, see Gold Medal Section. Index is on frontispiece, page 97.

DATA: For useful information on raw products, processing, distribution, associations, see Industry Data Section, with index on page 175.

PACKERS: Leading processors carry sales messages in this issue. See last page for Advertiers Index.

U. S. Processed Food Packs

in billions of pounds, converted from data in the Statistical Section. Conversion factors vary from 24 to 45 lbs. per case on canned foods, depending on the product. Glassed foods were converted at 18 lbs. per case for jellies and 24 lbs. for all other foods. For details, see Industry Statistics Section. Figures are revised from those reported in the 1960 Yearbook Number, on the basis of data from the U.S. 1958 Census of Manufacturers.

Year	—CANNED FOODS—			—DRY FOODS—			—FROZEN FOODS—			—GLASSED FOODS—			—ALL PROCESSED FOODS—		
	Fruit, Veg., Juices	All Other Foods*	Total	Fruit, Veg., Juices	All Other Foods*	Total	Fruit, Veg., Juices	All Other Foods	Total	Fruit, Veg., Juices, Nuts	All Other Foods	Total	Fruit, Veg., Juices, Nuts	All Other Foods	Total
1954	11.7	13.3	25.0	4.6	29.4	34.0	2.3	2.1	4.4	3.5	3.1	6.6	22.1	47.9	70.0
1955	12.4	14.1	26.5	5.2	30.6	35.8	2.8	2.3	5.1	3.5	3.9	7.4	23.9	50.9	74.8
1956	14.4	14.5	28.9	5.5	32.3	37.8	3.2	2.6	5.8	3.7	3.9	7.6	26.8	53.3	80.1
1957	12.8	14.8	27.6	4.8	32.2	37.0	2.8	3.0	5.8	3.7	4.2	7.9	24.1	53.9	78.0
1958	13.3	15.6	28.9	5.4	32.6	38.0	3.1	3.5	6.6	3.8	4.6	8.4	25.6	56.3	81.9
1959	12.4	16.0	28.4	5.6	35.2	40.8	3.3	3.6	6.9	3.7	5.0	8.7	25.0	59.8	84.8
1960	12.8	16.0	28.8	5.4	35.2	40.6	3.7	3.8	7.5	3.9	5.0	8.9	25.8	60.0	85.8

*Includes pet food.

CANNED MEATS: Provide 13% of U.S. Meat Supply

By JOHN H. EHRENFELD
Vice President, Libby, McNeill & Libby
and President,
National Meat Canners Assn.

JOHN H. EHRENFELD

Canned meats in the last year have continued the growth which started 25 years ago and have expanded each year since that time with the exception of the interruption of commercial production during World War II.

On the basis of present figures production during the calendar year 1961 will show a gain of about 6% over the preceding year. Total production in 1960 amounted to more than 1¾ billion pounds, a new high. The 1961 figure is expected to set another new record.

Unlike most meats, sales of meat in cans is not determined by the number of livestock sent to market or total meat production. It is anticipated that 2% more meat will be produced in 1961 than in 1960 but, because of the growing demand for meat in cans, the canned meat production will represent a larger percentage of the total.

Total meat production is of course computed on a dressed weight basis, including bones and trimmable fat. The anticipated figure for 1961 is 28 billion 700 million (28,700,000,000) pounds.

In order to get a true picture of the significance of canned meat production it is necessary to convert the finished weight figures to a basis comparable with dressed meat production. Customarily the conversion factor used by the industry is 2. On this basis the meat produced in cans in 1961 would be the equivalent of nearly 3¾ billion (3,750,000,000) pounds.

The canned meat industry, through National Meat Canners Assn., has continued its policy of calling the attention of the retail food industry to the profit possibilities in canned meats.

SPICES: Taste for Flavor in Foods Builds Demand

By HOWARD C. WOLF
McCormick & Co., Inc.
President,
American Spice Trade Assn.

HOWARD C. WOLF

Since World War II there has been a steady increase in America's use of spices and all signs point to another excellent year in 1962.

Our industry statistics show that spice consumption stood at approximately 127,131,000 pounds in 1946. In the remaining years of the 1940's it averaged 133,175,000 pounds. In the first half of the '50's, the average jumped to 158,192,000. During the second half of that decade it moved to 173,758,000. In 1960 the U. S. used 185,865,000 pounds of spices, drawing both from imports and domestic production. Not only has the total poundage used gained nearly 50%, but per capita consumption has moved ahead over 10%.

The picture is even brighter than these figures show because there are important consumption statistics which the industry is still missing. Were these available, it is very probable that we could say Americans are now using over 200 million pounds of spice a year. Since the items we are not able to follow statistically are products introduced largely in recent years, our rate of gain since World War II has been greater even than that shown above.

From all indications it is obvious that America is redeveloping and expanding its "taste for flavor" in foods. As with "tastes" in clothes and interior decorating, our tastes in food change and often go in cycles. From the writings of Colonial times, it is seen that much emphasis was placed on the proper seasoning of food. Less attention was paid to flavoring in mid-nineteenth century cookbooks. In the Gay Nineties era, the trend swung back, only to be reversed again in the 1920's. From the mid-twenties to the mid-thirties, this country was in the throes of its most radical fad on bland food. The new science of nutrition was blossoming and the experts were telling the public that good food didn't need the addition of spices and herbs.

Today the climate of opinion on spices has completely changed. Recently, Dr. Philip L. White, Secretary of the Council on Foods and Nutrition of the American Medical Association summed up current medical thinking in the statement: "There are very few don'ts about spicy foods. The use of spices is entirely a matter of personal preference. Spices do no harm, in fact they serve a most important culinary function by enhancing the flavors and odors of foods." Nutritionists at the Good Housekeeping Bureau took this approach a step further by recommending that food for children be tastefully seasoned.

There are excellent indications that the food processing industry is already capitalizing on this new taste for flavor in food.

SALAD DRESSINGS: Gains in Consumption Continue

By WENDELL W. BISHOP
President, Mrs. Clark's Foods, Inc. and President
Mayonnaise & Salad Dressing Mfrs. Assn.

The mayonnaise and salad dressing industry continues the steady growth which has made it such an important factor in the food field. In 1960, it produced 136.7 million gallons of dressing products, compared with only 41.7 million gallons in 1939—a gain of 328%. Per capita consumption for the same period rose from 2.5 to 6.1 pints. The 1960 figures break down by product types as follows:

Estimated Total Commercial Production 1960*	
Salad Dressing	57.1
Mayonnaise	55.4
Sandwich Spread	6.7
French Dressing	9.8
Other: Semisolid types	4.1
Liquid types	3.6
*Million gallons	136.7

This tremendous growth—reflecting the popularity of salads—is no accident. Obviously, the increasing year-round availability of salad greens has helped. However, the most important factor has probably been the increase in the variety, quality and all-around good taste of commercial salad dressings. No longer is the buyer—whether consumer or institutional—confined merely to mayonnaise or salad dressing. Now he can purchase various types of French dressing—plus Italian, Russian, Thousand Island, Roquefort, Blue Cheese, Fruit dressings, and many others. There are types and tastes to suit everyone—and provide a variety to salads that makes them an important part of the meal for both young and old.

WENDELL W. BISHOP

Mayonnaise and Salad Dressing Mfrs. Assn. has actively promoted this growth. Through its efforts, commercial dressings have for years been manufactured under strict Federal standards. In addition, the Association's technical committees are constantly working to improve both quality and variety of product. A bibliography of technical material is being compiled as a reference library for the industry.

Through its marketing and merchandising committees, the Association is actively working in the field of package design, display, publicity and public relations and special sales incentives—as well as the special problems of sales management in both the retail and institutional markets. A "talent bank" has been established which includes some of the country's best talent in these fields.

FROZEN VEGETABLES: Record Pack Moves Out Well

By JAMES S. LAWLESS
President, Frosted Fruit Products, and President,
Natl. Assn. of Frozen Food Packers

The final 1960 vegetable pack statistics were released a few months ago by National Assn. of Frozen Food Packers. The total amounted to almost two billion pounds — 1,958,-621,000 pounds to be exact. This represents a big increase from the 1,-626,600,000 pounds packed in 1959 and the 1,433,244,000 pounds in 1958.

One very significant fact about the pack last year is: that of the 25 major vegetable items on which reports were made, 22 showed increases. Spinach and peas declined less than 4%, and even though okra was down 20% it was still the second largest pack of this item on record.

The star performer was frozen potato products, which was up from 371 million pounds to an all time high of 551 million pounds.

JAMES S. LAWLESS

The cold storage holdings on August 1, without exception, show every vegetable item up over the same date a year ago; however, the amount of the increase is less than the increase in last year's pack. This indicates that consumption continues to increase but not at as fast a rate as production. This brings us around to the fact that the pack this year won't climb as fast as last year.

We undoubtedly will reach and pass the two billion pound figure though, even with a conservative pack schedule.

One of the few vegetables on which the pack figures for 1961 are known is asparagus. It is down 15% with the final figure standing at 34 million pounds.

Broccoli, cauliflower, and spinach still have a fall pack to be heard from and can be tailored to some extent by the market at packing time. Present stocks of these three items are ample so there is good reason not to overpack.

The potato products packers are just starting their fall pack and are in the very enviable position of being able to pack just as the market dictates. There is approximately 50% more production capacity available to them than last year, so it is a good thing they have nine months now in which to guess right.

When you hear the Grade A Fancy Flav-R-Pac story of net profits and sample the merchandise, we believe you will want to fill your cabinets with the bright yellow Flav-R-Pac packages that bring customers back again and again. We'd like to talk to you about Flav-R-Pac.

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Progress Reports

FROZEN FISH: More Sales in the Future

By HARVEY H. BUNDY, JR.
Vice-president and Treasurer
Gorton's of Gloucester
and President-Elect
National Fisheries Institute

I look on the frozen fish industry as a dark horse in the National food products group. However, through developments which I will discuss below, I believe that in the long run this industry will be one of the most rapidly growing segments of the food business.

The national production in 1960 of fresh and frozen packaged fillets and steaks was 152 million pounds, an increase of 5 million pounds over 1959. However, the domestic production of groundfish fillets amounted to only 94 million pounds, a reduction of 55 million pounds below the peak production of 1951. These figures, however, are not a fair indication of the sources of supply of frozen fish for the American consumer because the advent of the fish stick business in 1953 and the subsequent development of the fish portion business, both of which rely in large part on imported blocks of groundfish fillets, has resulted in a substantial overall increase in production and consumption of frozen fish products. The fish stick industry, which started in 1953, had a production of 65 million pounds in 1960 and the fish portion business, 48 million pounds. Both of these categories are continuing to show growth.

There is a great deal of evidence to the effect that fish in the diet can help substantially in reducing blood cholesterol levels significantly and may have a real effect on cardiac conditions. This should open up a real opportunity for the industry.

Fish, in the past, has not had a very high rating with the consumer from a quality standpoint; however, during the past few years standards for frozen fish have been established under the Department of Interior, inspection service by this Department has been established in many of the processing plants and the general level of quality of frozen seafood production has improved dramatically.

Continuous research is presently going on in several areas towards further improvement of these products. Time—temperature tolerance research carried on by the government and by many individual companies is providing very important data on the proper handling and storage conditions for frozen fish and seafoods. Distribution of fish and seafoods from the processing plant to the consumer must, and is being improved. As this continues, the consumer will find that frozen fish which she receives from the grocery store is increasingly attractive. Research along the lines of X-ray detection of bones in fish sticks and portions is in the laboratory stage and before too long should be able to be used commercially.

Marketing, in the past, of fish and seafood products has, in general, been entirely on a price basis, irrespective of quality. However, with the advent of substantially improved quality, increasing numbers of the industry are aware of the necessity for marketing and merchandising their products aggressively. Some of the grocery trade are now becoming aware that effective merchandising of quality fish and seafoods brings increased profits to them. With all of this development and with the obvious importance

of fish seafoods in the National diet, I look for a real growth in the sales of frozen fish and seafoods.

The problems in the long run are two-fold; one, of production to provide adequate supplies for the demand and, secondly, increased marketing and advertising expenditures to make the consumer aware of the importance of quality fish in his diet, particularly frozen fish which preserves the really fresh flavor that makes fish an attractive item.

DRIED FRUIT: Pack Short--Research Up

By the Staff of
CANNER/PACKER

The 1960 United States dried fruit pack totaled only 399 thousand tons, one of the smallest outputs in recent years. Apples, figs, peaches and prunes all ran well below normal in tonnage, and the packs of apricots, dates, pears and raisins were not sufficiently large to make up the difference. The 1960 outturn compares with nearly 447 thousand tons in 1959.

World packs were also down in 1960. Incomplete but comparable data show an output of only 1.3 million short tons last year, against over 1.5 millions the season before. As figures in the Statistical Section show, currants and figs were the only products to record a gain in 1960.

Preliminary data suggest a slightly larger outturn in the 1961-62 season in the United States, and probably a world gain as well.

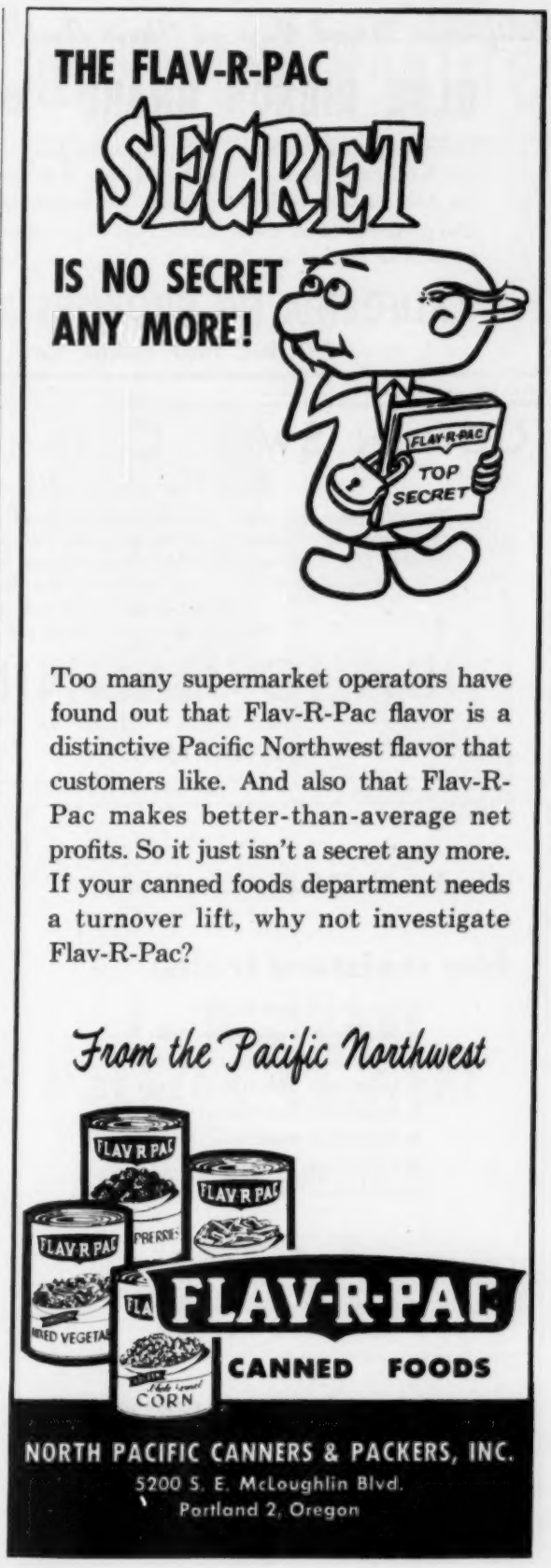
Despite the smaller packs in some recent seasons,, U.S. dry fruit companies are pushing ahead in packaging, in research and in merchandising, seeking ways to expand present markets.

Research by individual firms, and by government and school agencies, is directed toward exploration of mechanical dehydration procedures as possible replacements for parts of the tonnage still sun-dried, packing fruits with slightly higher moisture content or with other treatments to speed reconstitution, improvements of storage techniques better to safeguard quality and to achieve greater shelf-life, development of mechanical harvesting (see special report in this issue), studies of growing techniques which may increase average size and yield per acre.

In packaging, flexible bag packs are being improved both in merchandising value and in protective qualities, and one company is offering a new bag-in-a-carton pack with protective and convenience features.

In merchandising, continuing industry-wide promotion is being carried on under marketing programs for figs, prunes and raisins. In addition, packers are working closely with manufacturers using dried fruits as basic raw material for other foods—as figs and raisins for bakery products, and prunes for juice, baby foods, etc.

As usual, the United States exported more dried fruits than it imported in the 1960-61 season. Preliminary figures show that exports rose from 60 thousand tons in 1958-59 and 70 thousand in 1959-60 to 107 thousand in 1960-61. Imports were relatively steady, at 31 thousand tons in 1958-59, 30 thousand in 1959-60, and 31 thousand in 1960-61. Prunes and raisins were the principal exports, dates and figs the major incoming items.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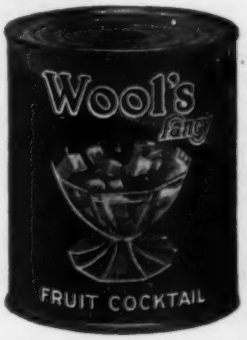

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PICKLES: Industry Meets Many Challenges Today

By L. EVERT LANDON
President, Nalley's Inc.,
and President,
National Pickle Packers Assn.

L. EVERT LANDON

Exciting changes and revolutionary developments in automation have characterized the pickle industry during the current year. Line speeds approaching 300 jars a minute using automatic pickle filling machines with all the preliminary slicing, grading and conveying equipment have been achieved. Some folks visualize vast improvements over this speed although almost everything from grading to filling operations has been done by hand for centuries, while the changes have taken place in only a few years.

The new developments in automation have created a need for greater management skills, marketing ingenuity and ability in personnel. I am proud to say that my team mates in National Pickle Packers Assn. have taken the lead in encouraging seminars in basic management subjects, and have plunged into the data processing field—even participating in the UNIVAC Marketing Game. Picklers became the first association group in the food processing industry to participate in this unusual business simulation game, which realistically teaches management for profit by means of a computer.

Because of the transitions in the distribution field which have squeezed sales of 70% of total grocery dollar volume into less than 38,000 retail outlets, the movement of one billion thirty-two million pounds of pickles in a single year to people of the USA have become a major program. New ideas, new packaging and new methods of obtaining retail displays are explored as never before. The pickle business is fiercely competitive and distribution involves 36 varieties of pickles including four major methods of processing, while new methods of processing are being explored through fundamental research at the present time. Association-sponsored plant breeding projects are at work to develop vines with only one branch, no tendrils, no pickles from the center to first 10 inches and thereafter a terrific supply of cukes. Another program involves hybrid cucumbers on a bush embodying all the desired flavor, size, color, shape and disease resistance factors.

The art of making pickles is not achieved overnight, although some types of pickles are made that fast. The art of marketing the total yield from every acre—including all the nubs, crooks, bloaters, and strange sizes besides the desired shapes—is a fascinating but sometimes elusive and difficult business.

CORN REFINING: Shipment of Products Shows Increase

By FLOYD J. HOSKING
Executive Vice-president,
Corn Industries Research Foundation

FLOYD J. HOSKING

Products of the corn refining industry will continue in good supply. Total domestic shipments of the basic (excluding byproducts) corn refining products during the first six months of 1961 reached a figure of 2,567,823,000 pounds. The comparable six-month total in 1960 was 2,533,453,000 pounds.

Shipments of corn syrup to domestic users will increase by about 5% this year, if the trend already set in the first half of the year continues. Shipments of corn syrup to canners and packers have jumped considerably over last year. Total dextrose shipments are a little ahead of last year.

During the past year and a half a number of amendments to the Federal standards of identity have favorably recognized the use of corn syrups and other corn sweeteners in foods. Among them are canned sweet potatoes, canned plums, canned prunes, canned seedless grapes, frozen concentrated lemonade, ice cream and related products and such canned berries as blackberries, blueberries, loganberries, black raspberries, red raspberries, strawberries and youngberries.

We expect a substantial upsurge in shipments of corn oil—approaching 10% over 1960. The widening use of corn oil in a greater variety of retail food products assures ready markets for the oil.

While domestic starch shipments are running slightly lower than last year, starch shipments to canners and packers increased during the first six months of 1961 over the first half of 1960.

The corn refining industry grinds more than 150 million bushels of corn a year. Shipments of its products, both domestic and export, will total more than 8 billion pounds. These products find uses in several hundred other products, both in food and non-food industries—a number of them vital to the national defense. The list continues to grow each year.

CITRUS JUICES: Shipments To Set Record in 1961-62

By HENRY CRAGG
Vice-president, Minute Maid Co., Division of Coca-Cola Co., and President, Florida Canners Assn.

Orange juice and frozen orange concentrate constitute the great gallonage of total citrus juices and concentrates. Although fresh oranges are produced in large volume in California and in smaller quantities in Texas, Arizona, and Louisiana, processed orange products are of lesser importance in these states, which leaves the field pretty much to Florida. The result of this emphasis on fresh channels in other states is that Florida now packs 95% of the nation's canned and concentrated citrus products. Frozen orange concentrate packed in Florida actually equals 98% of the U. S. total.

Now Florida is looking at a much larger 1961-62 orange crop, probably 96 to 98-million boxes. Prices will naturally be lower, but should still be very profitabe to growers, and the price

HENRY CRAGG

level will permit more oranges to be utilized for single-strength canned juice and for fresh use. The coming year, therefore, should be more like the 1959-60 season, with return to normal single-strength and fresh use, and with the increase in orange crop of about 6-million boxes making at least an additional 9-million gallons of concentrate over 1959-60's 78-million. A more detailed comparison of the 3 years would look like this:

UTILIZATION OF FLORIDA ORANGE CROP
(thousands of boxes)

	1959-60 (Act.)	1960-61 (Act. or Est.)	1961-62 (Projected)
Total Boxes	91,500	87,000	97,000
Boxes to Frozen Orange Concentrate	51,700	55,800	58,600
(Gallons Frozen Orange Concentrate)	(78,100)	(84,300)	(89,000)
Boxes to Single Strength	10,200	7,300	9,500
Boxes Directly to Chilled Juice	7,100	6,500	7,000
Boxes to Fresh Use	16,600	13,000	16,500
All Other Uses	5,900	4,400	5,400

It should be noted that chilled juice consumption is continually increasing, but much of it comes from concentrate rather than directly from fruit.

The projected pack of almost 90-million gallons of frozen orange concentrate would be a 6% increase over 1960-61 record, but this can be moved at a moderate reduction in price. Frozen orange concentrate should therefore continue to be a very good buy at the retail level.

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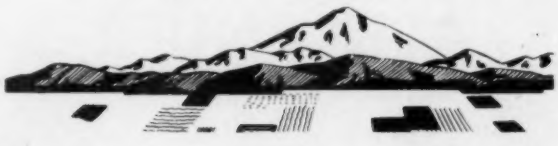

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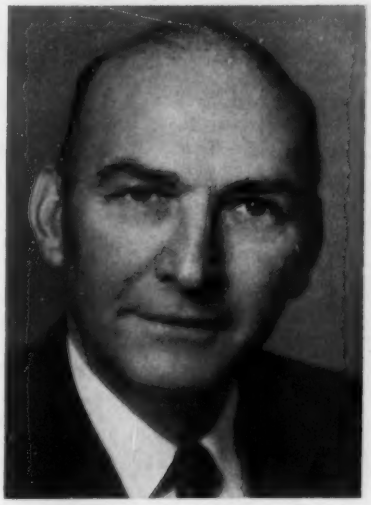
SHELLED NUTS: Brisk Market Expected This Year

By PAUL W. SHEPARD
General Manager
ElectriCooker Division
General Foods Corp.,
and President,
Peanut & Nut Salters Assn.



PAUL W. SHEPARD

With Mother Nature having provided a bountiful supply of excellent quality tree and ground nuts as well as favorable harvesting weather, this year's crop promises to bring lower prices on many items.

Here is a rundown on how the crop picture looks at present for the world's most popular nuts:

Peanuts: The USDA estimates as of August 1, that the '61 crop will be 844,000 tons, compared with 891,000 tons in 1960 and 781,000 ten-year average. Although the quantity and quality of the Virginia-North Carolina crop is being determined by the present weather, indications are that the crop will be excellent. The support price, incidentally, was increased $28.76 per ton over the 1960 crop.

Cashews: There are no crop reports to date on the '61 crop, but we should have some estimates soon on the British Tanganyika crop which usually arrives in India in December followed by the Mozambique crop in February and the local Indian crop in March. Total Indian exports for the period from January to July 1961 exceed the same period of 1960 by approximately 5%. This is accounted for by an increase in exports to other countries, since shipments to the United States are approximately the same as last year. The '60 crop (combined Indian and African) is the largest of record, approximately 195,000 long tons compared with 180,000 tons in 1959. The increased 1960 tonnage had its effect on the market which has gradually declined to its present levels.

The Indian cashew industry has recently requested the Central Indian government to impose import restrictions on the seed from Africa and is currently awaiting a decision. If the request is not granted, the market should weaken even further.

BAKING MIXES: Billion Packages Sold This Season

By W. B. CASH
Vice President, Marketing,
Flour and Mix Products
General Mills, Inc.

W. B. CASH

Baking mixes continued an important item in the purchase patterns of United States consumers during the past year. More than one billion packages of the various mixes were bought, an average of nearly 25 units per family.

While consumer sales measurement services report unit volume for the year at almost exactly the same as the previous year, dollar sales were up a little as the result of slightly greater purchase of some of the more specialized types.

Cake mixes continued as the bellwether, accounting for nearly half of the total unit sales as well as of the dollars. Like the total industry, this category made no significant advance in volume for the second consecutive year. Nevertheless, steadiness in the face of clear indications of decline in the baking habits of homemakers attests to its inherent strength. More than 80% of all households bought some cake mix during the year, and these buying households averaged almost 13 packages each.

New types and flavors again were featured by cake mix manufacturers during the year. Today the housewife is afforded a wide choice of more than 100 different brands and flavors, most of which are in national distribution.

Patterns of cake consumption have varied very little from last year. Approximately 40% of all cakes are still purchased while a little less than a third have been baked from mixes. The remainder were prepared from recipes.

CANNED VEGETABLES: Big Shipments Eat Up Large Packs

By JOHN C. HEMINGWAY
President, H. C. Hemingway & Co.
and President
National Canners Assn.

When the millionth tourist visited the White House recently, I came to the conclusion that the outlook for sales of canned vegetables was bright. This is not the kind of yardstick a professional economist like Carlos Campbell would use to measure a business situation or prospect, but this layman was impressed with the fact that a

JOHN C. HEMINGWAY

million was twice as many visitors to the White House as in any previous ½-year in history. Travel costs money, and if American family outings have jumped that much, spending for such an essential as canned vegetables can be expected. Fletcher Knabel said that "the recession Kennedy talked about was so bad, a million people left home to get away from it."

As this is written and published, figures are still being gathered on 1961 packs and shipment, so any effort to make a statement of the immediate canned vegetable situation would be speculative, unsupported by full facts.

The N. C. A. can, however, present the picture as of the close of the last pack and marketing season—the spring of 1961. This shows that the 1960 pack of canned vegetables was the third largest of record, representing the equivalent of 264 million cases (24/303's). This is approximately 8% less than the record 1956 pack, and the only other larger output was that of 1958—271 million cases.

Record, or near-record packs were produced in 1960 for asparagus, green and wax beans, carrots, mixed vegetables, white potatoes, catsup and chili sauce, tomato sauce, field peas, and succotash.

When record packs are accompanied by weak shipments and heavy carryover, canners wind up with a poor market situation, but in this case, the generous 1960 canned vegetable pack was alleviated by high shipments and low carryover. Shipments reached record heights in the 1960-61 marketing season, and the carryover stocks now coming into the 1961-62 season are smaller, and, in fact, the lowest since 1956.

MACARONI: Mfrs. Overcome Short Crop Problems

By EMANUELE RONZONI JR.
President, Ronzoni Macaroni Co., and President, National Macaroni Mfrs. Assn.

Because of a worldwide shortage of durum wheat, the special type used for making macaroni, spaghetti and egg noodles, manufacturers will be challenged to meet the ever-increasing demand for these foods.

Drought in North Africa which normally supplies Europe started the shortage. Canada and the United States, which came to the assistance of the export trade, then found themselves confronted with drought and curtailed production this year. This combination of circumstances has caused all elements of the industry to confer and to plan for future marketing practices that will prevent such shortages in the future.

Meanwhile, manufacturers and the millers who supply them with granulated grain and flour are looking for the varieties of wheat which most closely resemble durum to maintain quality until next year's crop.

Manufacturers have to be most explicit in giving cooking instructions, because more care will be required of the cook in handling these blends. Durum has a greater tolerance to over-cooking than the blends will have.

EMANUELE RONZONI, JR.

COFFEE: Industry Seeks Answers at Home & Abroad

By JACK R. DURLAND
President, Cain's Coffee Co., and Chairman, National Coffee Assn.

Coffee, as a world-wide industry, has problems which are contagious. Vexations afflicting one segment have a way of spilling over and affecting other parts. The coffee growing nations are beset by a serious surplus problem caused by overproduction. The U.S. trade, which depends entirely upon the producing countries for its green coffee supplies, is naturally interested in their welfare, and in the maintenance of free trade and free enterprise. The preservation of these institutions and the attainment of a mutually satisfactory solution to the overproduction and oversupply problem are probably the most important and the most challenging tasks facing the industry today.

With the foregoing as background, let us now switch focus to the domestic coffee scene. How is the industry doing at home? According to the Bureau of the Census, roastings of green coffee for the production of regular and instant coffee for the first six months of 1961 totaled 11,249,000 bags (132 lbs. each). This was 2% higher than the total for the first half of 1960 and a record high for any January-June period. Of the above total, 17.7% was used for processing instant coffee as compared to 18.4% for the first half of last year. This indicates a leveling off in the consumption of instant coffee, a trend which

has been apparent in the industry for some time.

Imports of green coffee for the first six months of this year totaled 11,459,000 bags, or 7% ahead of imports for January-June, 1960. If this pace is seasonally maintained, imports for the present year should set an all time record, surpassing the previous high of 23,269,000 bags during 1959.

From a packaging standpoint, the vacuum-packed can has enlarged slightly its share of the regular coffee market. In 1960, 70% of household purchases were in vacuum cans and 30% were in bags. Corresponding figures for 1959 were 68% and 32% respectively. The trend toward larger packages also continued, with the two-pound unit increasing its share from 23% in 1959 to 26% last year at the expense of the universally popular one-pound unit.

For instant coffee the shift to the larger size container during the past year has been striking. In 1960, 33% of household purchases of instant were made in units of 8 ounces or larger, while the corresponding figure for the previous year was only 5%.

The competitive battle for the consumer's preference continues to stimulate all coffee marketers. The formula for successful coffee selling is no different from the formula for selling almost any other consumer commodity, that is: a quality product, fairly priced, attractively and conveniently packaged, and effectively and credibly merchandised.

SPECIALTY FOODS: Sales Up But Education Needed

By Bernard Hamstra
President H. Hamstra & Company, and President, Natl. Assn. for the Specialty Food Trade

Total annual retail dollar volume figures, doubling and re-doubling regularly over the past 15 years, continue to show appreciable increases as we, in the specialty-gourmet food and confection industry, approach the beginning of another year.

The total of retail sales for 1962 is expected to exceed that of 1961—variously estimated at from $625,000,000 to $640,000,000 and up—by a considerable margin. Executives of specialty food outlets throughout the continental United States, and from points as far away as Alaska and Hawaii, attending the Annual Fancy Food & Confection Show, New York City, in August, the "Show of Shows," of the food industry sponsored by our Association, reported excellent business increases and strengthening interest in specialty foods everywhere.

Development of new domestic items in the fancy, specialty and gourmet categories and increases in volume of domestic delicacies have been notable during the past year or two. Imports are also on the increase but the differential between the volume of imported items and that of domestic merchandise has been considerably lessened.

Included among reasons for initial and continuing growth of specialty food volume are discovery and increasing familiarity with heretofore unknown foods and recipes by the ever-mounting numbers of Americans of all walks of life now traveling to the four corners of the earth on business and vacation trips; immense interest of women—and men—in new concepts and ideas in food preparation and cooking; higher incomes, both individual and family, resulting in many cases from the salary of a gainfully employed wife; the unending urge of Americans not only to keep up with the Joneses but to outdo them, even in the matter of food and party snacks served; and finally, the sheer delight, deliciousness and difference of these often rare and frequently unfamiliar edibles.

In spite of market expansions, mounting volume and spread of consumer demand, however, our segment of the total food industry has for its chief, immediate challenge, the need for continuing education of (1) retail sales personnel, and (2) the consumer.

This challenge is being met and the need supplied to a degree, by the present trade service program of our Association, initiated in 1959. It is

BERNARD HAMSTRA

CANNED FRUITS: Packs and Shipments Down Slightly

By Donald T. Saxby
Calif. Division Manager California Packing Corporation and President, Canners League of California

U. S. fruit canners packed only 1% less this past season than during their record-breaking pack-year of 1959-60. Their pack total for these items is 101.7 million standard cases (24/2½s). Movement to the consumer (excluding some imports) was also down slightly, being some 5% below the previous year, with around 96.5 million cases shipped in 1960-61, compared with slightly more than 101.8 million cases shipped in 1959-60.

California again accounted for the lion's share of the U.S. fruit pack. More than 57.2 million cases—well over half of the U.S. total—came from California canneries. And, as in previous years, the big California packs were cling peaches and fruit cocktail, which accounted for 21.6 million and 12.8 million cases respectively. In both instances these California packs accounted for all of the U.S. total.

Of six major items reported by U.S. fruit canners, packs were increased in four of them, remained about the same in one of them, and decreased in one other. The 1960-61 figures for

Dehydrated Vegetables

Packed to institutional and manufacturing specifications by one of the industry's pioneer processors of dehydrated foods.

PARSLEY	ONIONS	TOMATOES
CELERY	GARLIC	CARROTS
CABBAGE	GREEN PEPPERS	ASPARAGUS
SPINACH	RED PEPPERS	POTATOES

DEHYDRATED VEGETABLE MIXES

DEHYDRATED APPLES FREEZE-DRIED VEGETABLES

CANNED FRUITS AND VEGETABLES

Grapes Carrots
Spiced Grapes
Red Peppers

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Consult our technologists for methods and formulae

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DONALD T. SAXBY

these items stacked up this way: The nation's largest fruit pack, yellow cling peaches, increased less than 1% over the 1959-60 figure; second largest item, pineapple (including both Hawaii and Philippine packs), totalled 15 million, not including juice, up about 6%; fruit cocktail was up by the same amount, and applesauce—a major U.S. pack but comparatively small in California, was up to 11.8 million cases, a 3% increase. The nation's pear pack dropped some 10% to 8.5 million cases while the apricot pack increased a whopping 22% to a total of 6.1 million cases. In the case of California, its increase or decrease in each of these items paralleled the national percentages almost exactly, with the exception of pineapple, of course.

The olive pack, another California specialty, is estimated at around 3 million cases in the 1960-61 crop year, representing a tremendous increase of approximately 86% over the relatively short 1959-60 pack. The California apple pack, never a major California item, dropped off 46% to only 99,000 cases, while the U.S. apple pack was off 18%, totaling 3 million cases.

Purple plums, all of which are packed outside of California, took a substantial drop, totaling 374,000 cases for 1960-61 compared with 1.7 million for 1959-60, down 78%.

For the 1960-61 pack year, the industry had a supply on hand of 119.3 million cases, almost the same amount as it had the year previously. A total of 96.5 million cases were moved, as reported in my opening paragraph, leaving us with a carryover, then, of 22.7 million from the 1960-61 crop year.

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Harter Packing Co., located in the midst of the peach orchards, selects the best available fruit, and freshly cans it by the most modern methods, to provide the maximum consumer acceptance.

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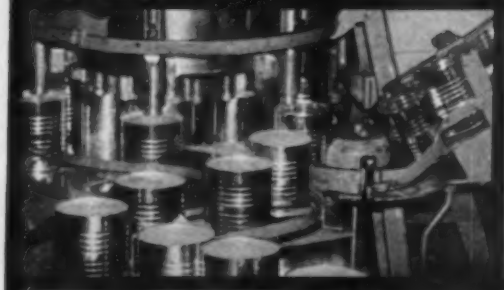

2. The pack in each can reflects our careful quality control.

3. Finished product will satisfy customers and win friends.

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BREAKFAST CEREALS: The Sales Outlook Is Bright

By LYLE C. ROLL
President, Kellogg Company, a member of Cereal Institute, Inc.

LYLE C. ROLL

Total sale of ready-to-eat breakfast cereals in the United States during the last 12 months has been more than a billion pounds representing more than 1,600,000,000 packages.

Following a pattern of increasing sales, the 1961 ready-to-eat cereal sales will reach an all time high. During the last five years sales have steadily grown from approximately 900 million pounds in 1956 to a record 1,034,600,000 pounds in 1960.

This increasing sales trend is further borne out by Food Field Reporter's recent Consumer Expenditure Study in which 1960 sales of ready-to-eat cereals show an increase of 4.7% over the previous year.

According to the latest reports the ready-to-eat cereal sales increase during a 12-month period ending June 30, 1961 was 3%. Population growth has been estimated at 1½% for the same period. This substantiates manufacturers' predictions that this market is still expanding.

The introduction of new cereals has certainly been a factor in increasing consumption. At least 12 new cereals have been successfully introduced by manufacturers during the last three years and more are destined to come. Several new forms of high-protein, low fat cereals are currently enjoying wide consumer acceptance. Another group of new cereals, the pre-sweets, have had amazing acceptance and currently account for 21% of ready-to-eat cereal sales as compared to 15.7% only three years ago.

CANNED SARDINES: Pack Short by Research Gains

By EUGENE L. BAILEY
President, North Lubec Mfg. & Canning Co.
and President, Maine Sardine Packers Assn.

Eastport and Lubec, Maine sardine canneries established in the middle 1870's processed the first sardines canned in the United States and pioneered the industry which today extends the length of the Maine Coast.

Thirty-one modern plants strategically located along the coast from Portland to Robbinston enjoy about 60% of the U.S. sardine market on a unit basis. The distribution pattern covers 100% of the retail chain food outlets and 93% of all grocery stores.

With an average pack of 2,500,000 standard one-hundred can cases over the past twenty years, Maine is one of the world's most important producers of sardines. Furthermore, this industry is the only domestic source of the so-called 3-3/4—4 ounce flat cans of this famed seafood.

The basic pack is 3-3/4—4 ounce, keyless cans in soy bean oil although production in key opening containers is growing. Mustard sardines in key and keyless cans are our second most important item. Other types are key and keyless in tomato sauce and olive oil; 12 and 15 ounce in oil, tomato and mustard.

The industry at this time expects a critically short pack in 1961 due to scarcity of fish. As of August first, production was less than 20% of average and inventories were at rock bottom. Scientists and veteran operators are of the opinion that the poor fishing is the result of a cold, wet spring and summer as there do not appear to be any biological factors involved.

Since the industry won legislative approval for a 25c a case State tax to finance a development program in 1951, great advances have been made in technological research, quality control, marketing and promotion.

In 1958 Maine packers initiated a major quality control and grading program which is operated effectively by the State of Maine Department of Agriculture under strict legal requirements. In addition the industry finances a supervised in-plant inspection program through an 8c a case assessment.

FROZEN FRUITS: More Sales Effort Is Needed

By REESE LAMB
Lamb-Weston, Inc.
President, Northwest Canners & Freezers Assn.

If there is unhappiness with the frozen fruit and berry picture in the United States, the problem is one largely due to apathy by producers and processors. Per capita consumption has risen slowly with the advent of frozen pies but use of packaged fruit and berries remains more or less static. Cabinet space set aside in super market cabinets for fruits remains small.

There may be several reasons for the sluggish market picture. **One:** We have a diet-conscious country and even the thought of a dessert of any kind is shunned to a great degree except in the New England and Northern Mid-Western states. Of course, it is the accompanying pastry that adds the calories because when served from the package three ounces of strawberries (one cup) contains 90 calories. Compared with one cup of whole milk with 166 calories or a cup of custard

REESE LAMB

with 283 calories or one doughnut with 136 calories, frozen strawberries are helpful for someone dieting.

Two: Processors and producers have not made their products as easy to buy and use as other easy-to-substitute foods such as bakery products and prepared mixes.

Three: No continuous overall effort has been made to interest the public in the flavor enjoyment of fresh-frozen fruits and berries.

Four: Little has been done in the way of improving product quality, appearance or packaging on many fruit and berry items since their introduction in frozen form. Although it is easy to blame changing buying habits, poor label design, packaging, and increased competition for the homemaker's dollar, the real culprit may be the product itself.

For example: Sliced and halved strawberries have little difference in served appearance. This may be due to the tight limits on the range of solids imposed by unrealistic buyers or the desire of packers for a uniform sugar distribution that can only be obtained by excessive mixing that breaks down the berry. In any event, the homemaker sees only a sweet, red river of broken berries. Again, the trouble may be due to the use of unimproved machinery.

The need for new techniques and machines for processing and handling frozen fruits and berries is needed now if these foods are to maintain and increase their sales position in the frozen food picture.

PRESERVES: Promotion and Quality Control Boosts Sales

By JOHN S. PHILLIPS
President, Puritan Preserve Co. and President, National Preservers Assn.

This year has proven most fruitful for the preserve and jelly industry, as a result of greatly-increased activities over past years by individual preservers and by their association. Total production and sales have gone up. National Preservers Assn. meetings and technical seminars have been held (in Florida, California, Illinois and New York, with other areas yet to be visited). Expansion and refinement of the Ernst & Ernst consolidated industry report has occurred. Industry promotional activities are being formulated. A keen awareness of the greatly stepped-up activities in the food industry has been gained.

Basic statistics show that production for the year 1960 was at an indicated rate of 896,684,800 lbs., which represents an increase of 5.95% over 1959 and of 10.2% over 1958. The current year's production, based on the first six months of 1961, will be ahead of 1960. Preserves, butters and marmalades represent about 60% of the total production—with strawberry the most popular item, followed by grape, peach, apple butter, blackberry, apricot, orange marmalade and red raspberry in that order. The remaining 40% of the production is jelly, with variety preferences nationally in the order of grape, apple, blackberry and strawberry.

JOHN S. PHILLIPS

Conventions, meetings and technical seminars are held separately, since the first two are designed principally for management and the last for those with more specialized production interests. The 1960 and 1961 conventions were at Ft. Lauderdale, Fla., West Coast meetings are in San Francisco in June, and both are complemented by technical seminars in Chicago, New York and San Francisco. This newly-adopted program is being very well received, and will be expanded in 1962.

Statistical reports, by both Ernst & Ernst and the NPA, Washington, D.C., office, furnish data on national production by variety and on national wage rates.

Standards of identity are being given serious study by NPA, in a continuing effort to upgrade and improve quality. Quality control also has been one of the foremost areas of activity of the industry and of NPA, through a continuous program of many years' standing. A novel feature is the gathering of samples of product at retail stores throughout the country, and their subsequent examination and analysis to insure that only products which meet or exceed the standards of identity requirements are offered for sale. Raw fruit samples are also picked up and examined by industry chemists, and information is sent out regarding proper use and control of pesticides.

MILK: Canned Pack Drops While Dry Output Shows Gain

By the Staff of CANNER/PACKER

In calendar year 1960, U.S. production of canned milk was slightly lower than the figure for 1959, continuing the general trend since 1945. Canned sweetened condensed gained in output from 1.4 to 1.6 million cases (48/14½ oz.), but the big pack of canned evaporated fell off from 52.1 to 49.9 million cases.

In contrast, the 1960 pack of dry

milk items went slightly over a million short tons this past season, against 963 thousand tons in 1959. In thousands of tons, the pack in the two calendar years was as follows:

Item	1959	1960
Whole milk	45	49
Nonfat milk	862	909
Buttermilk	41	43
Malted milk	13	2
Ice cream mix	2	1
	963	1,004

Exports continue to represent an important market for U.S. processed dairy foods. Shipments of canned milk abroad totaled 143 million lbs. in 1960, against 121 millions in 1959. Dry milk exports, however, declined from 305 million lbs. to 227 millions.

NUTS: U.S. Harvests Provide Good 1961 Supply

By DALE MORRISON
General Sales Manager
California Almond Growers Exchange

California almond production for 1961 is expected to be 70,000 tons inshell basis. If this forecast is realized, the 1961 crop will be 32% above last years crop of 52,800 tons and will be the second largest crop on record, exceeded only by the 1959 crop of 82,400 tons.

The United States walnut crop which suffered sunburn damage to nuts with a resultant loss in production and quality is estimated at 65,000 tons inshell basis. This amount is three per cent below the 10 year average and eight per cent below the 1960 production of 72,800 tons. Delayed foliation in Southern California and a poor dormant season during the past winter have decreased prospects for production in that area.

The 1961 filbert crop produced in Oregon and Washington is forecast at 10,580 tons, some 1,500 tons more than that produced in 1960 and 35 per cent above the average of the past 10 years. Growing conditions have been ideal and no substantial reduction in the estimate is anticipated between now and harvest.

Since the pecan crop is grown over a widely scattered area comprising the entire south east and most of Arkansas and Texas, it is always difficult to get an accurate estimate of pecan production. Based on available information, the tonnage of the improved varieties, which are grown mostly in Georgia, Alabama and Mississippi, is expected to be somewhat larger than a year ago at 57,850 tons inshell weight 17,850 tons above the 1960 crop and nearly 20,000 tons above average. The seedling crop, which is generally grown west of the Mississippi River, presently is estimated at 54,250 ton slightly larger than last years crop, and about 10 per cent above the 10 year average.

The 1961 forecast of Mediterranean almond production is 114,500 tons shelled basis. This figure represents the largest crop on record, some 12,000 tons higher than the previous record 1957 crop of 102,800 tons and 80 per cent larger than the 1954-59 average. The forecast by countries is as follows: Iran, 11,000 tons; Italy, 60,000 tons; Morocco, 3,500 tons; Portugal, 5,000 tons; Spain, 35,000 tons.

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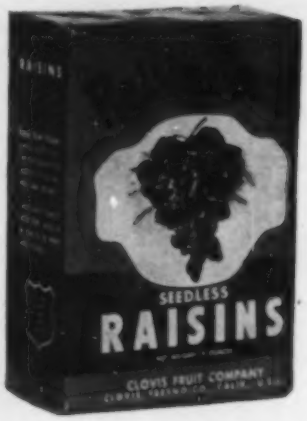

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Packed in 15-oz. cartons; 2 lb. lamoflim or kraft bags; 4 lb. kraft bags; 30-lb. bulk cartons; visible packs, etc.

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Frozen-

Strawberries

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Plums

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DRY VEGETABLES

By the Staff of CANNER/PACKER

The dry and dehydrated vegetable field is one of the most heterogeneous in the processed food business. It consists of many items, processed in a variety of ways, with some products sold almost entirely at retail, others practically exclusively for manufacture, still others popular in both.

Dry beans and peas continued to represent the largest segment of the business in 1960, as they have in the past. The output of both, however, declined from 1959, beans dropping from 943 thousand tons to 895, and peas falling from 230 thousand to 154.

USDA estimates nearly 20% of the total U.S. potato harvest was being processed, the usage breakdown for 1958 and 1959 having been as follows (millions of lbs.):

Item	1958	1959
PROCESSING		
Chips, shoestrings	1,706.3	2,022.4
Dehydration	591.7	765.6
Starch, flour	1,838.7	771.8
Frozen French fries	735.2	874.5
Other frozen	91.1	117.3
Canned potatoes	125.0	118.5
Canned hash, stew, soup	161.4	126.2
Subtotal	5,249.4	4,796.3
ALL OTHER		
Fresh shipping	14,487.4	14,293.7
Seed used on farm	713.4	725.3
Household use on farm	1,043.3	977.1
Feed	389.6	303.8
Shrinkage and loss	1,466.6	1,198.7
All other	3,223.2	2,033.2
Subtotal	21,323.5	19,531.8
Grand Total	26,572.9	24,328.1

Onions and garlic constiute another important branch of the dry vegetable field. This industry was founded primarily for supplying ingredients to other food manufacturers, but in recent years has also developed important outlets in both the institutional and retail fields. While production figures are not released, trade sources estimate that the 1960 U.S. pack amounted to a little less than 10 million lbs. of dehydrated garlic, and a little more than 20 million lbs. of onion. Some imported quantities also increase the domestic supply.

Dehydrated peppers have long been an industry of consequence in California, and in present output rank next to the onion-garlic business in tonnage.

Processed Food Merchandising Events Scheduled for 1961-62 Marketing Year

Special weeks and months to boost sales of canned, dry, frozen and glassed foods. Many sponsors offer merchandising materials

In the marketing year starting September 1, 1960, U.S. processed food trade associations and merchandising organizations will conduct some 49 sales events on behalf of their products.

Readers are invited to contact the sponsors of events of interest to them.

Sept. 1-30: National Better Breakfast Month (Cereal Inst., Inc., 135 S. LaSalle St., Chicago 3, Ill.).

Sept. 18-25: Cranberry Harvest Festival (Edaville Railroad, Rupe Wunschel, South Carver, Mass.).

Sept. 25-Oct. 1: 100% Pure Maple Syrup Week (100% Pure Maple Syrup Inst., St. Johnsbury, Vt.).

Oct. 1-31: Shrimp Fiesta (Shrimp Association of the Americas, Div. of National Fisheries Institute, 1614 20th St., N. W., Washington 9, D. C.).

Oct. 1-31: October Cheese Festival (American Dairy Assn., 20 N. Wacker Drive, Chicago 6, Ill.).

Oct. 1-31: October Rice Harvest Festival (Rice Council, 3917 Richmond Ave., Houston 27, Texas).

Oct. 9-15: International Pizza Week (International Pizza Club, Box 213, New York City).

Oct. 12-21: National Apple Week (Natl. Apple Week Assn., 1302 18th St., N.W., Washington 6, D. C.).

Oct. 15-30: Kraut Pork & Apple Dinner Season (Natl. Kraut Packers Assn., 202 S. Marion St., Oak Park, Ill.).

Oct. 16-22: Fish'n Seafood Parade (Fish'n Seafood Promotions, Div. of National Fisheries Institute, 1614 20th St., N.W., Washington 9, D. C.).

Oct. 16-22: Ripe Olive-Shrimp Pizza (Olive Advisory Board, 4 Hyde St., San Francisco, Calif. & Gulf Fishermen).

Oct. 19-28: National Macaroni Week (Natl. Macaroni Institute, 139 N. Ashland Ave., Palatine, Ill.).

Oct. 20-Dec. 25: Traditional Dessert Promotion (Amer. Bakers Assn., 20 N. Wacker Dr., Chicago 6, Ill.).

Oct. 23-29: National Honey Week (American Honey Institute, 114 N. Carroll St., Madison, Wis.).

Oct. 24-31: Natl. Popcorn Week (Popcorn Institute, 333 N. Michigan Ave., Chicago, Ill.).

Nov. 6-14: National Mushroom Week (Mushroom Canners' League, 25 N. Duke St., York, Pa.).

Nov. 15-Jan. 1: Holidays are Pickle Days (Natl. Pickle Packers Assn., 202 S. Marion St., Oak Park, Ill.).

Nov. 19-25: Asparagus Week (New Jersey Asparagus Industry Council, Inc., Centerton, N. J.).

Dec. 1-31: Egg Nog Month (Theodore R. Sills & Co., 39 S. LaSalle St., Chicago 3, Ill.).

Dec. 1-Jan. 31: Fruit Cocktail Flavor Fair (Cling Peach Advisory Board, 153 Market St., San Francisco 5, Calif.).

Jan. 1-Mar. 30: Louisiana Yam Supper Season (Louisiana Sweet Potato Commission, P. O. Box 132, Opelousas, La.).

Jan. 15-Feb. 15: Prune Cake Promotion (General Mills, Minneapolis, Minn. & Calif. Prune Advisory Board, Room 334, World Trade Center, San Francisco 11, Calif.).

Jan. 25-Mar. 1: Hot Cling Peaches for Cold Winter Days (Cling Peach Advisory Board, 153 Market St., San Francisco 5, Calif.).

Feb. 1-10: National Kraut and Frankfurter Week (Natl. Kraut Packers Assn., 202 S. Marion St., Oak Park, Ill.).

Feb. 1-29: Frozen Potato Month (Frozen Potato Products Institute, 333 N. Michigan Ave., Chicago, Ill.).

Feb. 2-17: Take Tea and See Week (Tea Council of the U.S.A. Inc., 16 E. 56th St., New York 22, N. Y.).

Feb. 16-22: National Cherry Week (Natl. Red Cherry Inst., 747 Deerfield Rd., Deerfield, Ill.).

Feb. 25-Apr. 15: 15th Annual Cling Peach-Cottage Cheese Promotion (Cling Peach Advisory Board, 153 Market St., San Francisco 5, Calif.).

Mar. 1-31: Cottage Cheese & Prune Promotion (American Dairy Assn., 20 N. Wacker Dr., Chicago, Ill. & Calif. Prune Advisory Board, Room 334, World Trade Center, San Francisco 11, Calif.).

Mar. 4-10: National Peanut Week (Natl. Peanut Council, Bender Bldg., Washington 6, D. C.).

Mar. 7-Apr. 22: Pickles'n Fish Flavor Pals (Natl. Pickle Packers Assn., 202 S. Marion St., Oak Park, Ill.).

Mar. 7-Apr. 22: It's Fish'n Seafood Time —Lenten Promotion (Fish'n Seafood Promotions, Div. of National Fisheries Institute, 1614 20th St., N. W., Washington 9, D. C.).

Mar. 7-Apr. 27: It's Fish and Seafood Time (Fish'n Seafood Promotions, Div. of National Fisheries Institute, 1614 20th St., N.W., Washington 9, D. C.).

Mar. 18-24: National Rice Week (Rice Council, 3917 Richmond Ave., Houston 27, Texas).

Apr. 1-30: Cereal & Milk Spring Festival (Cereal Inst., Inc., 135 S. LaSalle St., Chicago 3, Ill.).

Apr. 22-28: Honey for Breakfast Week (American Honey Institute, 114 N. Carroll St., Madison, Wis.).

Apr. 28-May 5: National Baby Week (Gerber Products Co., Fremont, Mich.).

May 12-19: National Frozen Food Week (Natl. Frozen Food Distributors Assn., 60 E. 42nd St., New York 17, N. Y.).

May 24-June 2: National Pickle Week (Natl. Pickle Packers Assn., 202 S. Marion St., Oak Park, Ill.).

June 1-30: Dairy Month (American Dairy Assn., 20 N. Wacker Drive, Chicago 6, Ill.).

June 7-16: International Kraut Round Dog Week (Natl. Kraut Packers Assn., 202 S. Marion St., Oak Park, Ill.).

July 1-31: National Iced Tea Time (Tea Council of the U.S.A., Inc., New York 22, N. Y.).

July 1-Aug. 31: Pic-l-nic Time (Natl. Pickle Packers Assn., 202 S. Marion St., Oak Park, Ill.).

July 1-Aug. 31: Kraut Summer Season (Natl. Kraut Packers Assn., 202 S. Marion St., Oak Park, Ill.).

Aug. 1-31: National Sandwich Month (Wheat Flour Inst., 309 W. Jackson Blvd., Chicago 6, Ill.).

Aug. 16-25: Spanish Green Olive Week (Spanish Green Olive Commission, 55 E. Washington St., Chicago, Ill.).

Sept. 1-30: National Better Breakfast Month (Cereal Inst., Inc., 135 S. La Salle St., Chicago 3, Ill.).

Sept. 24-30: 100% Pure Maple Syrup Week (100% Pure Maple Syrup Inst., St. Johnsbury, Vt., c/o E. R. Boylan).

October 1-31: EGGtober (Poultry and Egg National Board, 8 S. Michigan Ave., Chicago 3, Ill.).

Oct. 1-31: Biscuit/Muffin Month (Self-Rising Flour & Corn Meal Program, Inc., Jackson-Franklin Bldg., Chicago 6, Ill.).

Oct. 1-31: Shrimp Fiesta (Shrimp Association of the Americas, 1614 20th St., N.W., Washington 9, D. C.).

Oct. 1-31: October Cheese Festival (American Dairy Assn., 20 N. Wacker Drive, Chicago 6, Ill.).

Oct. 1-31: October Rice Harvest Festival (Rice Council, 3917 Richmond Ave., Houston 27, Texas).

Oct. 11-20: National Apple Week (Natl. Apple Week Assn., 1302 18th St., N.W., Washington 6, D. C.).

Oct. 15-21: Fish'n Seafood Parade (Fish'n Seafood Promotions, Div. of National Fisheries Institute, 1614 20th St., N.W., Washington 9, D. C.).

Oct. 18-27: National Macaroni Week (Natl. Macaroni Institute, 139 N. Ashland Ave., Palatine, Ill.).

Oct. 25-31: National Popcorn Week (Popcorn Institute, 333 N. Michigan Ave., Chicago 1, Ill.).

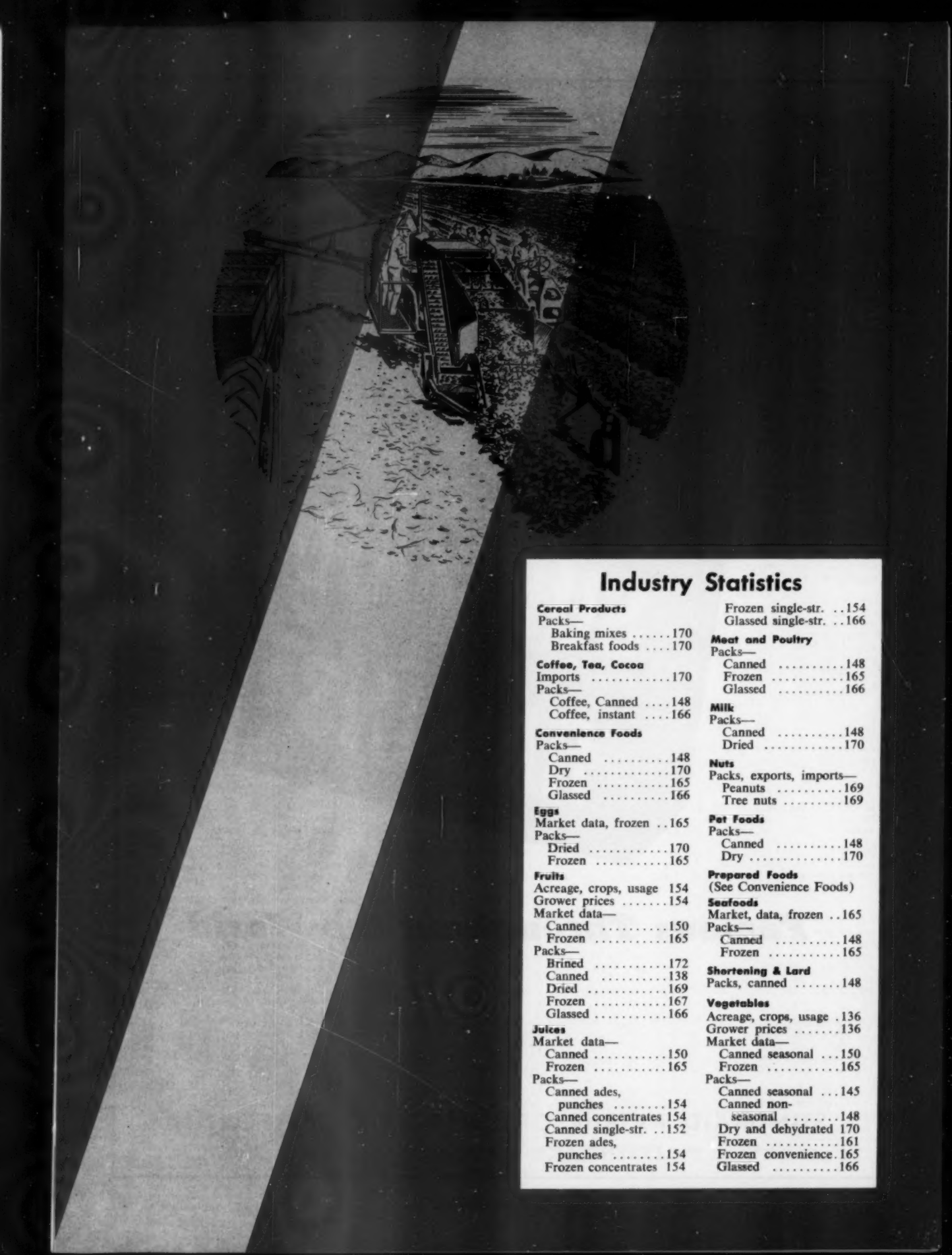
Nov. 11-17: Asparagus Week (New Jersey Asparagus Industry Council, Inc., Centerton, N. J., c/o Rene Gossiaux, Jr., Exec. Dir.).

These Del Monte® men help SELL canned foods, too

They're chiefly concerned with careful quality control, of course. But their insistence on quality helps demonstrate again and again that canned foods are good foods. Today Mrs. America firmly believes that fact, thanks to half a century of proof produced by all conscientious members of the industry.

Now, as the competition for the consumer's dollar grows stronger, quality control by every canner takes on new significance. The future success of all of us depends on the good quality of each can packed by every canner. And it adds real meaning to the fact that all of us are "partners in competition."

CALIFORNIA PACKING CORPORATION
Packers of DEL MONTE Brand Foods



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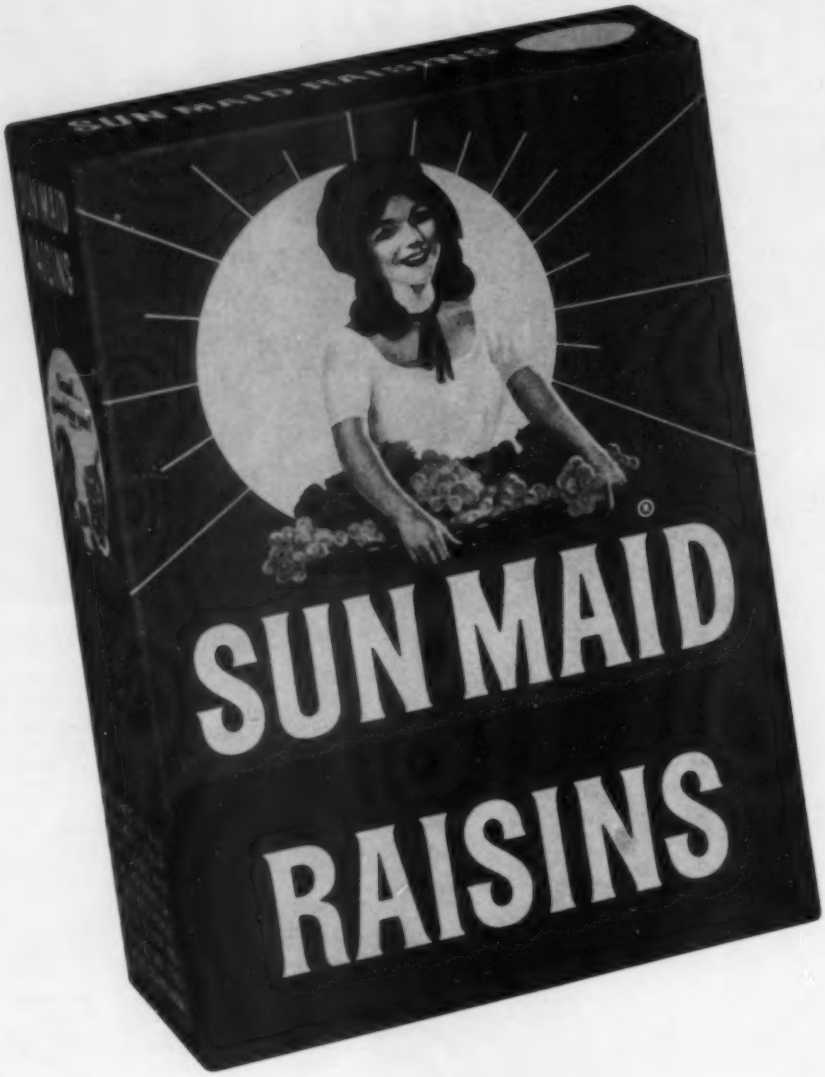

Famous Throughout the World

SUN-MAID RAISIN GROWERS OF CALIFORNIA
FRESNO, CALIFORNIA, U. S. A.

U. S. Fruit Acreage—Crops—Crop Utilization—Grower Prices

Year	Apple	Apricot	Cran-berry	Straw-berry	Other Berry	Sweet Cherry	Red-tart Cherry	Dates	Figs	Grape	Grape-fruit	Lemon	Orange	Tange-rine	Olive	Cling Peach	Free Peach	Pears	Plums, Prunes	TOTAL
U.S. BEARING ACREAGE--Thousands of Acres--Processing and Fresh Market																				
1946	872	73	26	90	82	99d	d	4	35	627	193	67	548	24	27	46	462	174	208	3,657
1947	865	73	26	112	80	97d	d	4	35	630	194	65	556	24	28	46	364	174	207	3,580
1948	850	70	27	117	78	97d	d	4	33	625	193	65	565	24	27	46	287	172	202	3,482
1949	834	60	27	116	75	96d	d	4	31	605	189	58	557	24	28	46	268	170	180	3,348
1950	817	52	26	126	74	95d	d	4	29	615	170	54	562	24	27	46	224	168	170	3,283
1951	781	50	26	139	73	95d	d	4	27	619	136	54	562	24	28	46	200	160	160	3,164
1952	704	49	25	123	72	94d	d	5	26	590	142	55	587	24	28	47	198	160	150	3,059
1953	644	48	24	100	72	93d	d	5	25	570	145	55	589	24	27	47	195	160	150	2,953
1954	627	46	23	96	71	93d	d	5	25	500	151	56	588	24	28	44	193	155	175	2,900
1955	572	43	22	101	71	93d	d	5	24	485	154	60	599	22	28	45	193	155	175	2,847
1956	549	47	22	116	70	93d	d	5	23	485	157	51	584	21	28	47	192	153	165	2,808
1957	540	46	21	125	70	92d	d	5	22	475	155	51	588	21	28	46	191	151	162	2,789
1958	551	47	21	111	70	92d	d	4	21	475	151	50	560	21	29	47	191	149	160	2,750
1959	553	47	21	98	70	94d	d	4	21	480	156	52	582	20	28	49	200	149	158	2,778
1960	a	a	21	96	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
U.S. Commercial Crop--Thousands of Short Tons--Rounded to Nearest 10,000 Tons																				
1946	2,850	340	40	130	80	110	120	20	130	3,140	2,330	550	4,770	210	50	550	1,440	820	790	18,470
1947	2,710	200	40	160	80	80	90	10	130	3,020	2,430	510	4,670	180	40	510	1,320	840	670	17,690
1948	2,140	250	50	190	80	80	130	20	100	3,060	1,790	400	4,240	200	60	500	960	610	620	15,480
1949	3,220	200	40	160	80	140	110	10	90	2,620	1,420	450	4,380	230	40	580	1,070	810	630	16,270
1950	2,990	220	50	200	90	80	160	20	80	2,680	1,820	530	4,960	220	40	470	730	700	500	16,540
1951	2,670	180	50	210	90	70	160	20	100	3,380	1,590	510	5,060	200	60	590	930	710	640	17,220
1952	2,270	180	40	210	90	100	120	20	100	3,160	1,500	500	5,100	220	60	460	1,040	720	480	16,370
1953	2,290	240	60	230	90	90	130	20	80	2,690	1,900	640	5,450	230	30	540	1,010	680	550	16,940
1954	2,680	180	50	210	80	80	110	20	90	2,560	1,650	550	5,620	230	50	480	1,030	720	600	16,950
1955	2,570	280	50	230	80	110	150	30	90	3,240	1,780	520	5,710	210	40	540	700	730	520	17,580
1956	2,420	200	50	280	70	70	100	20	90	2,910	1,760	640	5,720	90	70	650	1,030	790	690	17,650
1957	2,840	190	50	280	90	90	150	20	80	2,600	1,550	670	4,750	100	40	540	940	770	570	16,320
1958	2,990	110	60	270	90	90	100	20	80	2,950	1,700	670	5,270	200	70	510	1,200	710	360	17,450
1959	2,920	230	60	240	90w	80	140	30	60	3,140	1,620	720	5,500	130	30	610	1,170	740	540	18,050
1960	2,550	240	70	240	90w	70	120	20	60	3,020	1,640	600	5,210	190	70	610	1,160	640	460	17,060
U.S. Commercial Crop by Regions--1959--Thousand Short Tons																				
East	930	---	30	20	d	10	30	--	--	120	---	---	---	---	--	---	150	20	---	1,310
South	520	---	--	40	d	---	---	--	--	20	1,340	---	4,260	130	--	---	450	10	---	6,770
Midwest	510	---	20	30	d	10	100	--	--	80	---	---	---	---	--	---	140	40	10	940
West	960	230	10	150	90d	60	10	30	60	2,920	280	720	1,240	---	30	610	430	670	530	9,030
TOTAL	2,920	230	60	240	90	80	140	30	60	3,140	1,620	720	5,500	130	30	610	1,170	740	540	18,050
U.S. Commercial Crop by Regions--1960--Thousand Short Tons																				
East	770	---	40	30	d	10	20	--	--	150	---	---	---	---	--	---	160	20	---	1,190
South	480	---	--	50	d	---	---	--	--	10	1,380	---	3,930	190	--	---	480	20	---	6,520
Midwest	480	---	20	30	d	10	90	--	--	90	---	---	---	---	--	---	150	30	10	910
West	840	240	10	140	90d	50	10	20	60	2,770	260	600	1,280	---	70	610	370	570	450	8,440
TOTAL	2,550	240	70	240	90	70	120	20	60	3,020	1,640	600	5,210	190	70	610	1,160	640	460	17,060
U.S. Crop Utilization--1959--Thousand Short Tons																				
Canned	458	155d	18d	1	18	11	71	d	5	38	123	---	7	---	20	553	210	399	31	2,118
Dry	91	45	--	---	--	---	---	26d	57	892	---	---	---	---	d	---	56	10	365	1,542
Frozen	102	4	d	102	42	---	58	--	---	8	67	190	2,430	14	--	---	38	---	1	3,056
Misc. P.	379	d	d	18	10	39	1	d	---	1,635	497z	155z	1,066z	10	7	---	5	---	1	3,821
Fresh	1,854	25	15	119d	20d	27	6	--	2	555	927	371	1,951	94	--	4	828	318	132	7,248
Unsold	39	1	30	d	d	1	1	--	---	11	9	4	41	8	--	52	38	11	7	253
TOTAL	2,923	230	63	230	90w	78	137	26	64	3,139	1,623	720	5,495	126	27	609	1,175	738	537	16,038
U.S. Crop Utilization--1960--Thousand Short Tons																				
Canned	444	156d	42d	1	13	11	45	d	7	41	a	a	a	a	44	559	210	358	10	1,941
Dry	69	53	--	---	--	---	---	23d	52	776	a	a	a	a	d	---	38	9	348	1,366
Frozen	93	7	d	87	52	---	64	--	---	9	a	a	a	a	--	---	50	---	---	362
Misc. P.	261	d	d	25	10	32	1	d	---	1,618	1,636a	597a	5,210a	189a	26d	---	4	---	1	9,810
Fresh	1,684	22	25	122d	15d	24	5	--	1	544	a	a	a	a	--	3	835	260	99	3,639
Unsold	2	6	--	d	d	3	2	--	---	30	a	a	a	a	--	50	22	10	3	128
TOTAL	2,553	244	67	235	90w	70	117	23	60	3,018	1,636	597	5,210	189	70	612	1,157	637	461	17,046
U.S. Average Growers' Price--For Processing--Per Ton																				
1951	$ 24	$115m	$290	$336	$274y	$290	$133	$105	$145m	$ 73m	$14v	$67v	$26v	$26v	$173	$77	$63m	$96m	$50m	-----
1952	45	93m	376	318	246y	165	117	100	135m	70m	20v	78v	31v	30v	103	65	55m	45m	51m	-----
1953	63	94m	290	330	296y	237	176	130	100m	106m	14v	50v	36v	31v	198	55	53m	63m	42m	-----
1954	52	102m	232	318	274y	279	208	94	105m	96m	18v	51v	38v	20v	166	55	53m	70m	46m	-----
1955	44	88m	200	334	242y	191	117	104	105m	86m	17v	60v	46v	37v	242	81	63m	68m	41m	-----
1956	87	112m	206	292	352y	255	160	105	104m	74m	24v	38v	39v	87v	178	71	62m	76m	45m	-----
1957	44	87m	236	186	254y	275	165	113	105m	88m	29v	29v	57v	57v	236	64	50m	60m	37m	-----
1958	29	137m	232	240	198y	317	162	109	110m	91m	33v	46v	62v	45v	101	65	49m	79m	127m	-----
1959	34	94m	181	272	205y	316	128	128	151m	92m	52v	38v	60v	113v	229	59	47m	61m	40m	-----
1960	49	87m	170	286	250y	331	153	130	151m	81m	a	a	a	a	157	56	47m	79m	129m	-----

a—not available. d—fruits or regions combined as indicated. m—does not include prices of fruits for drying. p—preliminary. v—prices for fruits for all uses. w—partially or wholly estimated. y—unweighted average of Washington-Oregon berries for all purposes. z—principally juices and juice concentrates, which are not included in Canned although largely packed in metal cans.

U. S. Vegetable Acreage—Crops—Crop Utilization—Grower Prices

Year	Asparagus	Lima Beans	Snap Beans	Beets	Broccoli u	Brus. Sprouts u	Cabbage	Carrots u	Cauliflower u	Corn	Cucumbers	Garlic u	Onions u	Sweet Peas	Sweet Potatoes u	White Potatoes u	Spinach	Tomatoes	Dry Beans r	Dry Peas r	TOTAL
U.S. PROCESSING ACREAGE (EXCEPT AS NOTED--THOUSANDS OF HARVESTED ACRES																					
1951	93	107	121	17	36	6	15	73	29	436	143	2	101	453	312	1,348	42	419	1,403	300	5,456
1952	88	94	115	17	43	5	16	78	30	489	151	2	116	425	322	1,397	34	373	1,253	208	5,256
1953	89	111	148	18	43	6	17	81	30	503	146	1	132	431	343	1,536	31	305	1,379	258	5,609
1954	101	113	154	16	36	6	16	79	28	453	138	2	116	427	332	1,413	25	263	1,533	259	5,510
1955	116	101	134	18	40	5	13	79	29	390	125	3	114	435	341	1,414	31	331	1,502	281	5,502
1956	110	100	132	20	44	6	15	78	32	443	119	2	124	476	284	1,386	33	347	1,423	341	5,515
1957	105	91	153	17	39	6	11	72	33	442	129	2	111	455	281	1,383	33	305	1,379	272	5,319
1958	107	82	151	16	39	5	12	68	30	385	119	3	107	378	266	1,466	30	337	1,600	203	5,404
1959	111	78	165	14	41	6	10	66	27	419	10c	3	113	345	275	1,392	34	288	1,477	300	5,264
1960	112	92	176	14	42	6	14	70	30	412	97	5	102	214	203	1,397	33	282	1,437	283	5,021
U.S. PROCESSING CROP (EXCEPT AS NOTED)--THOUSANDS OF SHORT TONS																					
1951	105	95	274	154	82	26	184	717	226	1,198	275	7	1,002	512	800	9,789	151	4,258	791	177	20,823
1952	97	90	240	132	114	21	177	744	237	1,526	331	6	1,001	432	802	10,555	124	3,546	746	123	21,044
1953	94	108	319	165	108	34	221	766	225	1,514	327	5	1,263	465	950	11,584	120	3,268	825	153	22,514
1954	102	104	348	150	88	32	209	750	287	1,489	301	7	1,109	400	860	10,977	100	2,700	847	155	21,013
1955	129	89	306	144	105	23	161	715	226	1,174	312	11	1,071	456	1,047	11,352	130	3,278	832	126	21,689
1956	118	108	329	161	118	38	244	790	255	1,683	330	11	1,222	549	846	12,186	139	4,571	861	232	24,821
1957	114	93	361	164	93	31	170	715	238	1,525	370	10	1,212	558	837	11,977	140	3,315	781	166	22,870
1958	111	89	366	149	108	26	206	737	223	1,322	357	10	1,175	485	872	13,189	124	4,258	949	124	24,880
1959	118	83	369	142	113	30	150	681	206	1,582	339	14	1,278	473	942	12,164	148	3,538	943	230	23,543
1960	126	102	410	138	115	36	209	795	243	1,390	340	23	1,312	436	783	12,871	146	4,014	895	154	24,538
U.S. CROP BY REGIONS--1959																					
East	23	3	81	51	15	3	46	68	49	103	61	--	260	23	68	3,331	50t	417	42	---	4,694
South	6	11	93	19t	6	--	a	121	9	191	68	--	159	20	804	1,211	28	243t	----	---	2,989
Midwest	17t	30t	71t	52	---	--	50	74	8	1,043	162	--	219	199	13	2,384	a	790	384	6	5,502
West	72	39	124	20	92	27	54t	418	140	245	48	14	640	231t	57	5,238	70	2,088	517	224	10,358
U.S.	118	83	369	142	113	30	150	681	206	1,582	339	14	1,278	473	942	12,164	148	3,538	943	230	23,543
U.S. CROP BY REGIONS--1960																					
East	24	17	98	48	17	3	80	75	61	130	4	--	281	31	73	3,682	9	548	58	---	5,239
South	3	2	110	--	8	--	--	225	13	100	75	--	202	10	652	1,134	27t	227t	---	---	2,788
Midwest	18t	35t	74t	70	--	--	129t	92t	11t	886t	214	--	221t	232t	6	2,658	40	925	374	8	5,993
West	81	48	128	20	90	33	--	403	158	274	47	23	608	163	52	5,397	70	2,314	463	146	10,518
U.S.	126	102	410	138	115	36	209	795	243	1,390	340	23	1,312	436	783	12,871	146	4,014	895	154	24,538
U.S. CROP UTILIZATION--1959 (CANNED INCLUDES GLASS AND SPECIALTY PACKS)																					
Can	102	25	281	142	--	--	150	58	a	1,340	338g	--	a	303	116	122	90s	3,509g	370w	a	7,783
Dry	--	y	--	--	--	--	--	a	--	--	--	14x	110w	y	--	1,393	--	a	563	230	2,310
Freeze	16	58	88	--	93	29	--	56	56	242	--	--	--	170	a	496	110s	--	--	--	1,414
TOTAL	118	83	369	142	113u	30u	150	681u	206u	1,582	339g	14u	1,278u	473	942u	12,164	148x	3,538g	943	230	23,337
U.S. CROP UTILIZATION--1960 (CANNED INCLUDES GLASS AND SPECIALTY PACKS)																					
Can	115	28	298	138	--	--	209	78	a	1,109	340g	--	a	283	91	130w	80s	4,014g	370w	a	7,283
Dry	a	y	--	--	--	--	--	a	--	--	--	18x	112w	y	--	1,500w	--	a	525	154	2,309
Freeze	20	74	112	--	115	30	--	74	80	281	--	--	--	153	a	570w	106s	--	--	--	1,615
TOTAL	126x	102	410	138	115	36u	209	795u	243u	1,390	340	23u	1,312u	436	783u	12,871u	146x	4,014g	895	154	24,538
U.S. AVERAGE GROWERS PRICES FOR PROCESSING EXCEPT DRYING (EXCEPT AS NOTED)--PER TON																					
1951	$243	$146	$114	$21	$188	$197	$13	$72	$72	$23	$65	$170	$67	$90	$111	$54	$47	$31	$156	$83	-----
1952	210	148	121	22	171	213	20	61	73	24	65	321	92	91	123	65	46	29	173	105	-----
1953	203	153	125	20	156	200	13	64	62	23	65	320	27	94	91	27	39	27	163	124	-----
1954	226	150	120	21	158	154	12	66	70	21	59	260	43	93	89	43	40	24	161	100	-----
1955	246	143	111	21	158	175	18	64	72	20	54	221	47	89	67	36	39	25	140	106	-----
1956	226	150	120	20	156	173	12	53	75	21	55	209	55	92	80	40	40	26	137	91	-----
1957	187	142	117	19	147	142	15	66	66	20	54	185	57	90	84	39	38	25	143	72	-----
1958	194	141	111	18	154	167	11	57	74	19	53	206	54	88	78	26	41	26	134	100	-----
1959	198	133	107	18	154	182	15	60	67	19	51	189	48	88	65	45	38	24	141	78	-----
1960	218	141	110	20	162	181	15	48	65	12	55	154	42	87	84	40	36	26	141	85	-----

a—data not available. g—includes glass. r—entire crop is field-dried; bean figures include dried limas. s—includes processed open-market tonnage not reported by USDA. t—includes some tonnage from other areas. u—acreage, tonnage and price data include fresh market as well as processing crops. w—partially or wholly estimated. y—dried limas reported under Dry Beans, dried peas under Dry Peas. x—believed incomplete.

SNOHOMISH COUNTY BERRY GROWERS ASSN.
Northwest Frozen
Strawberries & Raspberries
Buyers Label or Sno-Co Brand
1301—4th Street
Marysville, Washington

FROZEN BERRIES—INSTITUTIONAL—RETAIL
Buyers Label or "Berry Treat" Brand
Washington Farmers Product Control Board
828 13th St. SE
Puyallup, Wash.

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Packers of Northwest
Frozen Fruits-Berries
Retail & Institutional
2045 Milwaukee Avenue
Puyallup, Washington

VISIT TWIN CITY FOODS DURING Seattle's World Fair

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Our plant at Stanwood, Washington

SO COME ON UP TO STANWOOD
to see one of the largest frozen food plants in the Northwest. Buyers are especially welcome and we'll whisk you around on our magic carpet.

OUR SEASONS ARE:

Strawberries—June
Peas—July and August
Corn—September

Your host will be Arne Lervick.

Plants at Snohomish, Arlington, Stanwood

TWIN CITY FOODS, INC.

NORTHWEST QUALITY PACKERS OF FROZEN FRUITS AND VEGETABLES

STANWOOD, WASHINGTON

U. S. Packs of Canned Fruits — Thousands of Cases

Year	BERRIES										APPLES	APPLE SAUCE	APRICOTS	CHERRIES			CRANBERRY SAUCE
	Black	Blue	Black Rasp.	Red Rasp.	Boysen	Goose	Logan	Straw	Young	TOTAL				Red Tart	Black Sweet	White Sweet	
TOTAL U.S. PACK---ACTUAL CASES																	
1951	444	1,155	304	113	326	37	31	84	4	2,498	3,388v	9,381	5,191	4,672	272	947	5,120
1952	571	739	231	97	302	56	67	150	a	2,213	2,560	8,914	4,675	3,892	364	1,448	4,695
1953	501	758	178	89	270	63	43	175	11	2,088	2,942	11,205	5,828	3,849	481	1,659	5,422
1954	413	897	160	141	324d	60	12	132	d	2,139	4,709	15,294	3,412	3,086	468	1,014	5,515
1955	419	684	119	83	212	55	11	58	15	1,656	3,587	13,477	7,189	4,902	566	1,479	5,862
1956	447	467	157	45	224d	85	2	106	d	1,533	3,917	15,339	5,085	2,749	191	865	6,052
1957	490	730	215	79	335d	82	6	77	d	2,014	3,668	14,006	5,120	3,604	d	1,503d	5,752
1958	592	561	240	88	361d	22	4	78	d	1,946	3,639	16,003	2,344	2,746	d	1,508d	6,115
1959	525	566	196	72	289d	51	8	100	d	1,807	4,034	17,240	6,215	4,128	d	1,006d	6,988
1960	287	505	182	89	121d	43	d	71	d	1,298	3,326	17,571	7,443	2,219	d	981d	4,244
U.S. PACK BY REGIONS, 1959																	
N.Y.	...	...	e	16	...	..	...	...	...	a	847	4,737	...	408e	...	...	...
Other E.	e	402	e	...	...	9	...	...	...	a	2,525e	8,404e	...	e	d	ed	6,988e
East	e	402	e	16	...	9	...	...	...	399	3,372e	13,141	...	408	d	ed	6,988e
Mich.	e	164	193	...	...	..	...	...	...	a	c	c	...	3,134	d	137d	...
Other MW	323e	e	...	...	...	..	...	21e	...	a	161c	1,274c	...	432	d	24	e
Midwest	323	164	193	...	...	..	...	21e	...	701	161c	1,274c	...	3,566	d	161	e
Fla.	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
Other S.	e	...	e	...	ed	..	...	e	...	a	e	e	...	...	...	...	...
South	e	...	e	...	ed	..	...	e	...	...	e	e	...	...	...	...	...
Calif.	...	...	...	...	163ed	..	...	...	d	a	199	2,487	6,034	...	d	182d	...
N.W.	202	...	...	54	126d	42	8	79	d	a	302	338	105	89	d	663	e
Other W.	...	...	3e	...	...	..	...	...	...	a	c	c	76	65	d	ed	...
West	202	...	3e	54	289ed	42	8	79	d	707	501	2,825	6,215	154	d	845	e
TOTAL	525	566	196	72	289d	51	8	100	d	1,807	4,034	17,240	6,215	4,128	d	1,006d	6,988
U.S. PACK BY REGIONS, 1960																	
N.Y.	...	...	e	16	...	..	...	...	...	16	803	4,608	...	185e	...	...	...
Other E.	e	326	e	...	...	9	...	...	...	335	1,972	8,150	...	c	d	ed	4,244e
East	e	326	e	16	...	9	...	...	...	351	2,775	12,758	...	185	d	ed	4,244e
Mich.	e	179	178	...	...	..	...	...	...	357	c	1,295	...	1,676	d	214d	...
Other MW	127e	...	...	...	...	..	...	26e	...	153	177c	635	...	152	d	40ed	e
Midwest	127e	179	178	...	...	..	...	26e	...	510	177c	1,930	...	1,828	d	254ed	e
Fla.	...	...	...	...	...	..	...	...	...	a	...	...	...	...	...	...	...
Other S.	e	...	e	...	ed	..	...	...	...	a	...	...	...	...	...	...	...
South	e	...	e	...	ed	..	...	...	...	a	...	...	...	...	...	...	...
Calif.	...	...	...	...	29ed	..	...	...	d	29	108	2,681	7,236	...	d	301d	e
N.W.	160	...	...	73	92d	34	d	45	d	404	266	202	189	127	d	426d	...
Other W.	...	...	4e	...	...	..	...	...	...	4	...	...	18	79	d	ed	...
West	160	...	4e	73	121ed	34	d	45	d	437	374	2,883	7,443	206	d	727d	e
TOTAL	287	505	182	89	121d	43	d	71	d	1,298	3,326	17,571	7,443	2,219	d	981d	4,244
U.S. PACK BY CONTAINERS, 1959																	
8-Oz.	11	5	---	15	12d	--	---	20	d	63	---	664	603	---	d	87d	640
#1-T	---	---	---	---	---	--	---	---	---	----	---	----	f	---	d	fd	----
#303g	281	348	9	50	242d	42	7	61	d	1,200	---	12,221	1,831	2,290	d	640fd	----
#2	---	---	---	---	---	--	---	---	---	----	---	----	----	47	---	----	----
#2 1/2	---	---	---	---	---	--	---	---	---	----	---	462	2,296	---	d	50	----
#10	166	212	27	5	23d	9	---	13	d	455	4,034	2,107	1,465	1,633	d	209cd	323
Other	67	1	---	2	12d	--	1	6	d	89	---	1,786	20	158	d	10cd	6,025
TOTAL	525	566	196	72	289d	51	8	100	d	1,807	4,034	17,240	6,215	4,128	d	1,006d	6,988
U.S. PACK BY CONTAINERS, 1960																	
8-Oz.	9	2	---	20	6d	--	d	19	d	56	---	695	563	---	d	114	530
#1-T	---	---	---	---	---	--	---	---	---	----	---	----	----	---	d	----	----
#303g	186	328	153	62	91d	30	d	37	d	887	---	11,999	2,066	1,196	d	669	----
#2	---	---	---	---	---	--	---	---	---	---	---	----	----	44	---	----	----
#2 1/2	---	---	---	---	---	--	---	---	---	---	---	498	2,743	---	d	45	----
#10	90	173	29	1	33d	13	d	14	d	343	3,326	2,177	2,046	930	d	141	273
Other	2	3	---	6	1d	--	d	1	d	12	---	2,202	25	49	d	12	3,441
TOTAL	287	505	182	89	121d	43	d	71	d	1,298	3,326	17,571	7,443	2,219	d	981d	4,244
U.S. PACK IN STANDARD CASES (24/2 1/2)																	
1951	330	750	273b	b	222d	27	25	56	d	1,683	3,117	5,496	4,614	3,602	d	900d	2,671
1952	442	449	202b	b	200d	41	51	93	d	1,478	2,355	5,532	4,004	2,891	d	1,295d	2,464
1953	345	498	161b	b	179d	39	27	104	d	1,353	2,706	6,983	4,759	2,829	d	1,059d	2,812
1954	274	596	186b	b	210d	38	8	82	d	1,394	4,333	9,378	2,796	2,254	d	953d	2,961
1955	289	449	117b	b	138b	37	8	39	d	1,077	3,300	8,284	5,919	3,453	d	1,377d	3,009
1956	306	304	117b	b	143d	58	1	63	d	992	3,603	9,454	4,151	1,830	d	698d	3,120
1957	341	477	177b	b	210d	53	4	48	d	1,310	3,375	8,855	4,165	2,593	d	969d	2,976
1958	412	348	184b	b	234d	14	2	50	d	1,244	3,348	10,395	1,862	1,951	d	961d	3,140
1959	355	377	111	43	177d	32	5	62	d	1,162	3,711	11,368	5,046	2,956	d	870	3,687
1960	193	330	105	54	77d	29	d	45	d	833	3,660	11,757	6,144	1,603	d	628d	2,226

a-Not available. d-Products combined as indicated. e-Regions combined as indicated. w-Estimated. v-Includes pineapple packed in the Philippines. g-Includes No. 300. f-Sizes combined as indicated. p-Preliminary b-Products combined as indicated. c-Regions combined as indicated.

U. S. Packs of Canned Fruits — Thousands of Cases (continued)

Year	CITRUS FRUIT: Orange Segts.	CITRUS FRUIT: Citrus Salad	CITRUS FRUIT: Grapefruit	MIXED FRUITS: Figs	MIXED FRUITS: Cocktail	MIXED FRUITS: Salad	MIXED FRUITS: Other Mixed	RIPE OLIVES	PEACHES: Clingstone	PEACHES: Spiced	PEACHES: Freestone	PEARS	PINEAPPLE	PLUMS: Purple	PLUMS: Other	TOTAL ALL FRUITS
1951	40	655	3,819	848	10,743	1,116	126	2,226	20,711	309	3,825	7,895	15,229	2,473	133	101,617
1952	26	762	4,407	992	9,526	973	107	1,743	16,797	177	4,800	7,666	17,425	1,667	159	95,988
1953	31	990	5,070	681	10,760	1,167	141	1,290	19,752	513	4,461	7,210	18,196v	1,412	127	105,265
1954	23	891	6,081	741	11,907	999	193	2,043	15,626	677	5,314	9,768	17,977v	1,762	134	109,773
1955	30	763	5,483	923	13,178	1,159	253	1,869	20,778	637	5,181	10,574	19,948v	1,824	71	121,398
1956	18	655	5,001	925	15,460	1,298	296	2,591	24,761	465	7,603	11,117	19,815v	2,455	162	128,353
1957	13	531	4,650	727	14,884	1,172	279	1,901	21,935	497	6,201	10,772	18,557v	1,127	116	119,029
1958	18	646	5,072	800	15,107	839	289	2,214	20,151	471	8,244	9,777	19,483v	1,465	53	118,912
1959	21	546	4,433	457	16,944	1,202	438	1,612	24,783	838	8,866	11,788	19,489v	1,904	74	134,886
1960	p	p	p	658	18,135	1,101	391	2,900p	24,981	848	9,408	10,671	20,947v	438	46	133,811
U.S. PACK BY REGION, 1959																
N.Y.	---	---	---	---	---	---	---	---	---	---	-----	e	-----	-----	---	a
Other E.	---	---	---	---	---	---	---	---	---	---	229e	e	-----	e	---	a
East	---	---	---	---	---	---	---	---	---	---	229e	e	-----	e	---	24,537
Mich.	---	---	---	---	---	---	---	---	---	---	355	e	-----	e	e	a
Other MW	---	---	---	---	---	---	---	---	---	---	-----	e	-----	113e	74e	a
Midw.	---	---	---	---	---	---	---	---	---	---	355	713	-----	113e	74e	7,104
Fla.	d	575dp	4,500pe	---	---	---	---	---	---	---	-----	-----	-----	-----	---	a
Other S.	---	---	e	---	---	---	---	---	---	---	953	e	-----	-----	e	a
South	d	575dp	4,500pe	---	---	---	---	---	---	---	953	e	-----	-----	e	6,028
Calif.	---	---	-----	457	16,944	1,202	438	1,612	24,783	687	5,964	6,427	-----	-----	---	a
N.W.	---	---	-----	---	---	---	---	---	---	---	1,365	4,648	-----	1,791	e	a
Other W.	---	---	-----	---	---	---	---	---	---	151	e	-----	19,489	e	e	a
West	---	---	-----	457	16,944	1,202	438	1,612	24,783	838	7,329e	11,075	19,489	1,791	e	97,217
TOTAL	d	575dp	4,500pe	457	16,944	1,202	438	1,612	24,783	838	8,866	11,788	19,489v	1,904	74	134,886
U.S. PACK BY REGIONS, 1960																
N.Y.	---	---	---	---	---	---	---	---	---	---	-----	e	-----	-----	---	---
Other E.	---	---	---	---	---	---	---	---	---	---	226e	e	-----	e	---	226
East	---	---	---	---	---	---	---	---	---	---	226e	e	-----	e	---	226
Mich.	---	---	---	---	---	---	---	---	---	---	304	e	-----	e	e	304
Other MW	---	---	---	---	---	---	---	---	---	---	-----	e	-----	169e	46e	215
Midw.	---	---	---	---	---	---	---	---	---	---	304	691e	-----	169e	46e	1,210
Fla.	32	718	5,455	---	---	---	---	---	---	---	-----	e	-----	-----	---	6,205
Other S.	---	-----	---	---	---	---	---	---	---	---	1,973	e	-----	-----	e	1,973
South	32	718	5,455	---	---	---	---	---	---	---	1,973	e	-----	-----	e	8,178
Calif.	---	---	---	658	18,135	1,101	391	2,900p	24,981	701	5,634	5,831	-----	-----	---	60,332
N.W.	---	---	---	---	---	---	---	---	---	---	1,271	4,149	-----	269	e	5,689
Other W.	---	---	---	---	---	---	---	---	---	147	e	---	20,947	e	e	21,094
West	---	---	---	658	18,135	1,101	391	2,900p	24,981	848	6,905e	9,980	20,947	269	e	87,115
TOTAL	32	718	5,455	658	18,135	1,101	391	2,900p	24,981	848	9,408	10,671	20,947v	438	46	133,811
U.S. PACK BY CONTAINERS, 1959																
8-Oz.	d	38	212	56	1,787	177	---	---	1,342	---	234	891	813	70	2	7,439
#1-T	---	---	-----	---	f	f	---	1,275	f	f	f	f	------	f	f	1,320
#303g	7	413	3,289	247	8,835f	601f	41	---	5,431f	46f	2,032f	4,034 f	------	256f	7f	39,712
#2	---	---	4	---	266	---	---	---	---	---	-----	-----	6,619	-----	---	6,932
#21/2	---	---	-----	71	4,097	270	143	---	13,623	649	5,706	4,708	2,739	842	10	35,666
#10	---	---	-----	83	1,959	154	249	337	4,367	---	866	2,112	4,105	719	55	25,185
Other	14d	95	928	---	---	---	5	---	20	143	28	43	5,213	17	---	118,632
TOTAL	21	546	4,433	457	16,944	1,202	438	1,612	24,783	838	8,866	11,788	19,489v	1,904	74	134,886
U.S. PACK BY CONTAINERS, 1960																
8-Oz	---	54	268	67	1,801	148	2	-----	1,408	---	219	811	817	18	---	5,613
#1-T	---	---	-----	---	f	f	f	w	f	f	f	f	-----	-----	---	---
#303g	7	556	4,294	373	9,797f	578f	29f	-----	5,560f	60f	1,874f	3,887f	-----	99	8	27,122
#2	---	---	-----	---	286	-----	---	-----	-----	---	-----	-----	6,990	-----	---	7,276
#21/2	---	---	-----	96	4,576	240	159	-----	13,605	687	6,587	4,202	2,396	141	6	32,695
#10	---	---	-----	122	1,659	135	201	w	4,329	101	717	1,708	4,655	180	32	13,839
Other	25	108	893	---	16		---	2,900p	79	---	11	63	6,089	-----	---	10,184
TOTAL	32	718	5,455	658	18,135	1,101	391	2,900p	24,981	848	9,408	10,671	20,947v	438	46	133,811
U.S. PACK IN STANDARD CASES (THOUSANDS OF CASES, 24/2 EQUIVALENT)																
1951	a	396	2,356	705	9,003	855	124	2,226	19,145	335	3,658	6,647	12,183	2,237	121	82,074
1952	a	457	2,642	782	7,489	720	97	1,743	14,964	214	4,370	6,550	14,614	1,497	126	76,284
1953	a	589	2,999	480	8,228	868	122	1,279	17,163	506	3,937	5,808	13,408	1,288	111	79,287
1954	a	542	3,627	525	9,074	737	183	2,043	13,818	639	4,663	7,775	13,147	1,593	113	82,548
1955	a	467	3,296	637	9,809	831	234	1,869	17,923	594	4,615	8,345	14,719	1,639	59	91,456
1956	a	393	3,053	627	11,033	917	265	2,590	21,322	443	6,575	8,881	14,554	2,193	137	96,831
1957	a	327	2,886	506	10,638	854	245	1,901	18,484	478	5,393	8,568	13,495	978	99	89,095
1958	a	394	3,167	549	10,734	611	265	2,300	17,545	449	7,261	7,883	14,165	1,271	44	89,548
1959	16	339	2,763	321	12,074	857	308	1,610	21,490	802	7,810	9,499	14,167	1,701	66	102,513
1960	20	340	2,900	460	12,848	771	361	2,900p	21,587	810	8,449	8,506	15,014	370	40	101,718

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"SUPER-TENDERIZED" Prunes are tastier, juicier, more tender

Now . . . easier to use. Just open the carton and remove the new Inner Bag.

Inner Bag keeps the prunes better and longer.

A natural confection right out of the bag. And they cook very, VERY fast for those who prefer prunes cooked.

A great opportunity for grocers to build a big, new, highly profitable prune volume.

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now available in sealed cartons with

HANDY REMOVABLE INNER BAG

SUNSWEET GROWERS INC. SAN JOSE 6, CALIFORNIA

Bringing You a Brand of Dependability With Immediate Buyer Acceptance

Most of you are familiar with NUGGET brand fruits and vegetables. We are pleased to bring you this brand of distinction in the popular varieties, each representing a quality pack at an honest value.

PEACHES halves and sliced • APRICOTS
PEARS • FRUIT COCKTAIL • SPINACH
PEAS • TOMATOES • TOMATO PRODUCTS
PUMPKIN • ASPARAGUS

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FRANK M. WILSON COMPANY, INC.
PACKERS AND DISTRIBUTORS • STOCKTON, CALIFORNIA

HOME OF

Nugget

BRAND

FINE CALIFORNIA
FRUITS and VEGETABLES

FROM THE HEART OF CALIFORNIA

. . . a message

Located near Stockton in the center of California's rich food producing area, the Frank M. Wilson Company prepares and processes a steady flow of the finest fruits and vegetables the world knows. The plant, located at Stockton, is a streamlined modern unit, up to the minute in every detail from high speed equipment to scientific sterilization. Staffed with a personnel of long canning experience, our varieties are finished and distributed through reputable food brokers to wholesalers and independent chains throughout the Union.

In addition to packing and distributing under our own brand, our program since the beginning has been one of specializing in packing top-quality merchandise under private label for those houses in America which emphasize and insist upon superior quality for their brands. These customers feel secure in the knowledge that they can depend on the Frank M. Wilson Company for the all important factors —top quality and safety.

FRANK M. WILSON COMPANY, INC.

PACKERS AND DISTRIBUTORS • STOCKTON, CALIFORNIA

Canned and frozen FRUITS & VEGETABLES

PACKERS OF THE FAMOUS

"SANTIAM BRAND GREEN BEANS"

Santiam **FLAV-R-PAC**

STAYTON CANNING COMPANY

Co-operative
Stayton, Oregon
Member of North Pacific Canners & Packers, Inc.

ROGERS
and
WALLA WALLA

Two Great Names
In the Canning Industry

ROGERS CANNING CO. & WALLA WALLA CANNING CO. HAVE MERGED TO BECOME ONE OF THE NATION'S LARGEST SINGLE PACKERS OF PEAS, ASPARAGUS, CORN, SPINACH AND PEAS & CARROTS. FLAVORFUL VEGETABLES GROWN IN THE BLUE MOUNTAIN VALLEYS OF THE NORTHWEST ARE HARVESTED & PROCESSED WITH HIGH-SPEED EQUIPMENT BY THE SAME SKILLED STAFF THAT HAVE SERVED THIS TRADE FOR MANY YEARS.

ROGERS WALLA WALLA CANNING COMPANY

Milton - Freewater, Oregon

U. S. Packs of Canned Seasonal Vegetables

Year	ARTI-CHOKES	ASPARAGUS White	ASPARAGUS Green	FRESH BEANS Green	FRESH BEANS Wax	FRESH BEANS Lima	BEETS	CAR-ROTS	CORN Cob	CORN Cut	OKRA Alone	OKRA With tomato	FRESH PEAS Green	FRESH PEAS Blackeye etc.	PI-MENTOS	PUMPKIN AND SQUASH
Total U.S. Pack (Thousands of Actual Cases)																
1951	50w	1,099	3,870	17,321	2,546	3,278	7,834	2,030	100w	30,189	473	431	37,837	1,495	672	3,481
1952	50w	1,278	3,318	14,392	2,817	2,569	7,217	2,600	100w	38,212	421	344	29,446	1,758	653	4,449
1953	a	1,345	3,144	20,549	3,348	3,377	9,137	2,629	100	36,245	482	622	31,365	2,359	2,133	2,547
1954	a	1,356	4,256	25,231	3,543	3,952	7,738	2,010	183	36,761	401	185	27,245	1,474	1,488	1,786
1955	a	2,167	4,902	22,204	2,730	3,179	8,195	1,792	200w	29,208	251	218	31,222	2,171	2,300	3,568
1956	a	1,993	4,252	22,392	3,357	3,371	10,440	2,968	200w	42,245	242	137	33,094	1,090	896	4,217
1957	a	1,983	4,786	24,038	4,229	2,739	9,059	2,295	200w	37,517	351	300	37,807	1,630	919	2,844
1958	a	2,827	4,659	25,359	2,837	2,752	8,652	3,034	200w	32,078	545	442	33,110	2,275	1,261	2,997
1959	a	1,926	5,148	23,731	3,154	3,008	8,673	2,729	200w	40,160	441	281	29,020	1,987	2,205	3,128
1960	a	2,141	5,901	25,661	3,550	3,445	7,896	3,961	200w	34,435	368	254	26,822	1,973	2,598	3,501
U.S. Pack by Regions, 1959 (Thousands of Actual Cases)																
N.Y.	----	----	----	2,733	1,212	e	2,814	300	a	1,338	----	----	882	----	----	e
Penna.	----	----	----	702	214	e	e	e	a	568	----	----	e	----	----	e
Other E.	----	----	674	207	240	61e	83e	233e	a	1,115e	----	----	1,480e	----	e	478e
East	----	----	674	3,642	1,666	61e	2,897	533	a	3,021	----	----	2,362	----	e	478e
Ind.	----	----	----	----	----	----	----	----	a	1,060	----	----	n	----	----	169
Mich.	----	----	892	875	297	----	229	m	a	----	----	----	n	----	----	m
Ohio	----	----	----	----	----	----	----	m	a	711	----	----	n	----	----	143
Wisc.	----	----	----	2,684	939	495	2,570	478	a	9,794	----	----	9,781	----	----	m
Other MW	----	----	731	214	30	1,367	1,679	996m	200w	18,199e	----	----	8,437n	----	----	1,683m
Midwest	----	----	1,623	3,773	1,266	1,862	4,478	1,474	200w	29,764	----	----	18,218	----	----	1,995m
Md.-Del.	----	----	406	1,983	51	728	e	e	a	1,918	----	----	e	----	----	e
Fla.	----	----	----	509	----	----	----	----	a	----	----	----	----	----	----	----
Ozarks	----	----	----	1,497d	d	----	----	----	a	----	----	----	----	----	----	----
Texas	----	----	----	1,164	----	----	----	----	a	----	----	----	----	----	----	----
Other S.	----	----	----	1,433	----	e	e	e	a	e	441	281	e	1,987	2,205e	e
South	----	----	406	6,586	51	728	e	e	a	1,918e	441	281	e	1,987	2,205e	e
Calif.	a	1,926	1,774	1,733	----	----	----	120	a	----	----	----	----	----	e	n
N.W.	a	----	671	6,969	51	----	1,045	579	a	4,606	----	----	5,722	----	----	n
Intrmtn.	a	----	----	1,028	120	357	253	23	a	851	----	----	2,718	----	----	655m
West	a	1,926	2,445	9,730	171	357	1,298	722	a	5,457	----	----	8,440	----	e	655n
TOTAL	a	1,926	5,148	23,731	3,154	3,008	8,673	2,729	200w	40,160	441	281	29,020	1,987	2,205	3,128
U.S. Pack by Regions, 1960 (Thousands of Actual Cases)																
N.Y.	----	----	----	2,988	1,551	e	2,582	588	a	1,098	----	----	738	----	----	e
Penna.	----	----	----	824	269	e	e	e	a	545	----	----	e	----	----	e
Other E.	----	----	863	759	258	33e	18e	300e	a	966	----	----	1,343e	----	e	573e
East	----	----	863	4,571	2,078	33e	2,600	888	a	2,599	----	----	2,081	----	e	573e
Ind.	----	----	----	----	----	----	----	----	a	e	----	----	n	----	----	96
Mich.	----	----	972	764	313	----	180	----	a	----	----	----	n	----	----	m
Ohio	----	----	----	----	----	----	----	----	a	545	----	----	n	----	----	89
Wisc.	----	----	----	2,956	873	639	2,330	793	a	7,751	----	----	9,658	----	----	m
Other MW	----	----	855	248	35	1,473	1,530	1,426	200w	16,536	----	----	9,362n	----	----	2,129m
Midwest	----	----	1,827	3,968	1,221	2,112	4,040	2,219	200w	24,832	----	----	19,020	----	----	2,314m
Md.-Del.	----	----	517	2,129	88	947	e	e	a	2,121	----	----	e	----	----	e
Fla.	----	----	----	849	----	----	----	----	a	----	----	----	----	----	----	----
Ozarks	----	----	----	1,964d	d	----	----	----	a	----	----	----	----	----	----	----
Texas	----	----	----	1,863	----	----	----	----	a	----	----	----	----	----	----	----
Other S.	----	----	----	858	----	e	e	e	a	----	368	254	e	1,973	2,598e	e
South	----	----	517	7,663	88	947	e	e	a	2,121	368	254	e	1,973	2,598e	e
Calif.	a	2,141	1,945	1,977	----	----	----	108m	a	m	----	----	----	----	e	n
N.W.	a	----	749	6,715	73	----	1,059	746	a	4,283	----	----	4,868	----	----	131
Intrmtn.	a	----	----	767	90	353	197	m	a	800m	----	----	1,053	----	----	483n
West	a	2,141	2,694	9,459	163	353	1,256	854	a	4,883m	----	----	5,721	----	e	614n
TOTAL	a	2,141	5,901	25,661	3,550	3,445	7,896	3,961	200w	34,435	368	254	26,822	1,973	2,598	3,501
U.S. Pack by Containers, 1959 (Thousands of Actual Cases)																
8-Oz.	a	94	277	1,642	304	332	773	236	a	3,468	f	f	3,935	----	1,126g	----
#1-P	a	357	303	----	----	----	----	----	a	f	----	----	180	8	----	----
#303-300	a	892	3,070	16,022	2,394	2,250	6,340	1,250	a	24,735	369	274	21,374	1,581	----	1,136
#2	a	516	59	----	----	----	----	----	a	----	----	----	----	41	----	----
#2 1/2	a	----	----	603	----	----	----	----	a	----	----	----	----	----	101	1,225
#10	a	15	332	5,207	424	426	1,540	1,238	a	3,328	63	6	3,413	339	22	644
Other	a	62	1,107	257	32	----	20	5	200w	8,629f	9f	1f	118	18	956	123
TOTAL	a	1,926	5,148	23,731	3,154	3,008	8,673	2,729	200w	40,160	441	281	29,020	1,987	2,205	3,128
U.S. Pack by Containers, 1960 (Thousands of Actual Cases)																
8-Oz.	a	81	283	1,661	379	426	799	358	a	3,247	f	f	3,544	----	1,289g	----
#1-P	a	315	935	----	----	----	----	----	a	----	----	----	----	17	----	----
#303-300	a	1,079	3,677	18,103	2,674	2,538	5,559	1,867	a	22,259	298	241	20,271	1,568	----	1,269
#2	a	566	58	----	----	----	----	----	a	----	----	----	----	46	----	----
#2 1/2	a	----	----	----	----	----	----	----	a	----	----	----	----	----	114	1,192
#10	a	21	373	4,990	485	477	1,496	1,728	a	2,511	57	9	2,879	325	21	894
Other	a	79	575	274	12	2	42	8	200w	6,418	13f	4f	128	17	1,174	146
TOTAL	a	2,141	5,901	25,661	3,550	3,445	7,896	3,961	200w	34,435	368	254	26,822	1,973	2,598	3,501
U.S. Pack in Standard Cases (Thousands of Cases, 24/2 equivalent)																
1956	a		d 5,422d	20,982	3,000	3,395	9,691	3,075	a	35,668	212	115	29,248	875	349	5,097
1957	a		d 5,887d	22,379	3,795	2,518	8,359	2,388	a	31,533	311	249	33,857	1,418	357	3,327
1958	a		d 6,183d	23,876	2,556	2,464	7,871	3,164	a	27,075	485	368	29,549	1,951	493	3,535
1959	a		d 5,811d	22,328	2,810	2,692	7,914	2,873	a	33,810	394	233	25,674	1,727	638	3,666
1960	a		d 6,544d	24,053	3,166	3,082	7,264	4,141	a	28,961	331	214	26,446	1,709	697	4,083

(See following page for footnotes)

U. S. Packs of Canned Seasonal Vegetables (continued)

Year	SPINACH	OTHER GREENS	TOMATOES	TOMATO PRODUCTS (TIN) Catsup	Chili Sauce	Paste	Puree	Sauce	Misc. (Calif. only)	MIXED VEGETABLES Peas and Carrots	Succotash	Triple Succotash	Salad and Other	RHUBARB	MISC. VEGS.	TOTAL VEGS.
1951	6,742	2,606	27,672	4,120	323	8,800w	5,881	8,200w	1,069	1,569	259	a	2,172	a	1,699	183,818
1952	5,419	2,650	25,176	2,374	197	6,900w	3,633	7,800w	267	1,485	318	a	2,282	a	1,560	169,685
1953	5,159	2,203	20,841	2,222	405	5,300w	2,829	4,800w	274	1,738	488	a	1,991	a	1,690	169,147
1954	3,871	2,105	20,964	2,212	183	4,434	2,499	7,059	344	1,226	307	a	1,914	a	2,289	166,933
1955	5,829	2,509	23,679	3,669	318	6,794	3,307	8,640	496	1,408	217	a	1,870	a	2,074	175,117
1956	6,282	2,249	28,678	4,979	716	9,557	4,768	10,378	744	1,591	385	a	1,874	a	2,776	206,231
1957	6,230	2,153	20,895	2,873	636	6,570	3,456	6,863	922	1,861	523	a	1,598	35	a	185,312
1958	5,211	2,523	29,604	3,477	594	8,242	3,397	10,979	898	1,518	384	a	2,320	49	a	192,224
1959	7,112	1,773	23,000	3,073	570	6,160	2,781	8,686	1,404	1,746	386	a	1,973	58	a	184,513
1960	6,338	2,474	24,558	4,073	654	7,441	3,436	10,298	1,281	1,712	345	a	2,350	60	a	187,726
U.S. PACK BY REGIONS, 1959																
N. Y.		m	290	196		e	e	e	-----	e	---	a	-----	---	a	9,765
Penna.	-----	-----	245	-----	---	-----	e	e	-----	e	---	a	-----	---	a	1,729
Other E.	-----	-----	187	584e	314e	-----	330e	552e	-----	130e	e	a	e	e	a	6,668
East		m	722	780	314e	-----	330e	552e	-----	130e	e	a	e	e	a	18,162
Ind.	-----	-----	1,650	-----	---	-----	253	-----	-----	m	---	a	-----	---	a	3,132
Mich.	-----	-----	-----	-----	---	-----	71	-----	-----	m	---	a	-----	---	a	2,364
Ohio	-----	-----	1,118	-----	---	-----	90	-----	-----	m	---	a	-----	---	a	2,062
Wisc.	-----	-----	-----	-----	---	-----	-----	-----	-----	m	---	a	-----	---	a	26,741
Other MW		m	421	e	e	-----	m	e	-----	901m	386e	a	1,973e	---	a	37,217
Midwest		m	3,199	e	e	-----	414	e	-----	901m	386e	a	1,973e	---	a	71,516
Md.-Del.		m	3,794	-----	---	-----	e	e	-----	e	---	a	-----	---	a	8,880
Fla.		m	1,330	-----	---	-----	-----	-----	-----	---	---	a	-----	---	a	1,839
Ozarks	1,787	918	563	-----	---	-----	-----	-----	-----	m	---	a	-----	---	a	4,765
Texas		m	78	1,649	-----	---	-----	-----	-----	-----	---	---	a	-----	---	a	2,891
Other S.	2,161	777e	996	e	e	-----	161m	e	-----	e	---	a	-----	---	a	10,442
South	3,948	1,773	8,332	e	e	-----	161m	e	-----	e	---	a	-----	---	a	28,817
Calif.	3,164		e 10,173	2,293	256	6,160	1,833	8,134	1,404	n	---	a	-----	---	a	38,970
N. W.		m	e	-----	---	-----	-----	e	-----	561	---	a	-----	58e	a	20,262
Intrmtn.		m	584e	a	a	-----	43	e	-----	154n	e	a	e	---	a	6,786
West	3,164		e 10,757	2,293	256	6,160	1,876	8,134	1,404	715	e	a	e	58e	a	66,018
TOTAL	7,112	1,773	23,000	3,073	570	6,160	2,781	8,686	1,404	1,746	386	a	1,973e	58e	a	184,513
U.S. PACK BY REGIONS, 1960																
N. Y.		m	456	-----	e	-----	e	e	-----	e	---	a	-----	---	a	8,991
Penna.	-----	-----	250	-----	---	-----	e	e	-----	e	---	a	-----	---	a	1,888
Other E.	-----	-----	264	-----	328e	-----	298e	933e	-----	139e	e	a	e	e	a	8,445
East		m	970	1,370e	328e	-----	298e	933e	-----	139e	e	a	e	e	a	20,324
Ind.	-----	-----	2,003	-----	---	-----	285	-----	-----	m	---	a	-----	---	a	2,384
Mich.	-----	-----	-----	-----	---	-----	50	-----	-----	m	---	a	-----	---	a	2,279
Ohio	-----	-----	1,345	-----	---	-----	81	-----	-----	m	---	a	-----	---	a	2,060
Wisc.		m	-----	-----	---	-----	-----	-----	-----	m	---	a	-----	---	a	25,000
Other MW		m	525	e	e	-----	m	e	-----	863m	345e	a	2,350e	---	a	37,877
Midwest		m	3,873	e	e	-----	416	e	-----	863m	345e	a	2,350e	---	a	69,600
Md.-Del.		m	e 4,155	-----	---	-----	e	e	-----	e	---	a	-----	---	a	9,957
Fla.		m	1,492	-----	---	-----	-----	-----	-----	---	---	a	-----	---	a	2,341
Ozarks	1,734	1,454	484	-----	---	-----	-----	-----	-----	m	---	a	-----	---	a	5,838
Texas		m	60	808	-----	---	-----	-----	-----	---	---	a	-----	---	a	2,731
Other S.	1,620	960e	851	e	e	-----	142m	e	-----	e	---	a	-----	---	a	9,624
South	3,354	2,474	7,790	e	e	-----	142m	e	-----	e	---	a	-----	---	a	30,289
Calif.	2,984		e 11,311	2,703	326	7,441	2,534	9,365	1,281	n	---	a	-----	---	a	44,116
N. W.		m	-----	-----	---	-----	-----	e	-----	563	---	a	-----	60e	a	19,047
Intrmtn.	-----	-----	614	-----	---	-----	46	e	-----	147n	e	a	e	---	a	4,350
West	2,984	e	11,925	2,703	326	7,441	2,580	9,365	1,281	710	e	a	e	60e	a	67,513
TOTAL	6,338	2,474	24,558	4,073	654	7,441	3,436	10,298	1,281	1,712	345	a	2,350	60	a	187,726
U.S. PACK BY CONTAINERS, 1959 (Thousands of Actual Cases)																
8-Oz.	323	-----	-----	-----	---	-----	23	7,059	-----	531	93	a	260	---	a	20,466
#1-P	214	-----	567	-----	---	-----	287	-----	-----	37	---	a	-----	---	a	1,953
#303-300	4,353	1,157	12,778	-----	---	-----	119g	-----	-----	1,150	276	a	1,426	28	a	102,974
#2	-----	-----	400	-----	---	-----	58	-----	-----	-----	---	a	-----	---	a	1,074
#21/2	1,108	191	3,808	-----	---	145	546	-----	-----	-----	---	a	-----	---	a	7,727
#10	1,067	425	5,200	2,962	296	1,673	1,513	76	878	28	17	a	287	30	a	18,870
Other	47	-----	247	111	274	4,342	235	1,551	526	-----	---	a	-----	---	a	31,449
TOTAL	7,112	1,773	23,000	3,073	570	6,160	2,781	8,686	1,404	1,746	386	a	1,973	58	a	184,513
U.S. PACK BY CONTAINERS, 1960 (Thousands of Actual Cases)																
8-Oz	396	-----	-----	-----	---	3,136g	13	7,427	-----	560	69	a	294	---	a	23,964
#1-P	179	-----	633	-----	---	-----	280	-----	-----	31	---	a	-----	---	a	2,390
#303	3,720	1,746	14,236	-----	---	-----	196	2,790	-----	1,066	268	a	1,651	32	a	107,108
#2	-----	-----	469	-----	---	-----	45	-----	-----	-----	---	a	-----	---	a	1,184
#21/2	914	151	4,071	-----	---	98	756	-----	-----	-----	---	a	-----	---	a	7,929
#10	1,111	576	4,833	3,968	395	2,371	1,982	78	809	55	8	a	405	28	a	32,885
Other	18	1	316	105	259	1,836	164	3	472	-----	---	a	-----	---	a	12,266
TOTAL	6,338	2,474	24,558	4,073	654	7,441	3,436	10,298	1,281	1,712	345	a	2,350	60	a	187,726
U.S. PACK IN STANDARD CASES (Thousands of Cases, 24/2 equivalent)																
1956	6,409	2,224	29,883	23,118h	1,560h	12,260	6,158	12,065	875	1,342	325	a	1,674	a	a	215,022
1957	6,346	2,103	21,686	17,296h	884h	8,341	4,527	7,969	1,078	1,578	447	a	1,429	a	a	190,062
1958	5,240	2,318	30,465	20,170h	905h	10,851	4,320	12,158	1,089	1,273	322	a	1,868	a	a	200,549
1959	7,135	1,791	24,126	18,162h	1,098h	7,920	3,525	9,448	1,899	1,465	328	a	1,767	48	a	189,280
1960	6,394	2,416	25,413	23,468	1,129	10,236	4,422	10,791	1,376	1,455	288	a	2,166	44	a	200,289

a--Not available. w--Partially estimated. d--Products combined as indicated. e--Regions combined as indicated. f--Includes Other East, Other Midwest, and other West. f--Sizes combined as indicated. g--Includes other cans of nearby sizes. h--Includes glass. m--Regions combined as indicated. n--Regions combined as indicated.

California Canned Fruits and Vegetables

Apricots
Apricot nectar
Asparagus—all-green
Asparagus—green-tipped and white
Boysenberries
Cherries—sweet
Fruit cocktail
Fruit mix
Fruit for salad
Lima beans
Olives—black
Peas
Peaches—cling
Peaches—spiced
Peaches—Elberta
Peach nectar
Pears
Pear nectar
Pumpkin
Spinach
Tomatoes
Tomato catsup
Tomato juice
Tomato paste
Tomato puree
Tomato sauce
Pizza sauce
Chili sauce
Concentrated tomato juice

For Discriminating Private Label Buyers

We of Tri-Valley are proud that so many of the leading firms marketing under their own brands obtain their California canned foods from our canneries.

We think you will be proud to offer your trade these quality foods, each one packed to your exact specifications from the finest raw materials available in any growing area.
Let us quote on your requirements.

Also Available Under Our Own Labels

For those who do not have their own labels, we make the following brands available: "Tri-Valley," "Cock O' the Walk," "Corina," "Campania" and special labels for the institutional trade.

Attractive labels and superior merchandise make these brands sales builders wherever they appear on retail shelves. These same brands also have won many friends in the institutional field. Buyers who want consistent quality can count on these labels.

TRI-VALLEY PACKING ASSOCIATION

Growers — and — Canners

PLANTS LOCATED AT

Stockton California | Modesto California | San Jose California

General Offices: 240 Battery Street, San Francisco, California

Vineyard-Fresh
CINDERELLAS
Thanks to our growers — who care about quality—housewives everywhere know they're getting the world's freshest raisins in the world's most attractive package.
Painstaking extra processing steps and foil packages preserve vineyard freshness all the way to the kitchen.
CINDERELLA
ZANTE
CURRANTS
CINDERELLA
SEEDLESS
RAISINS
CINDERELLA
SEEDED MUSCAT
RAISINS
WEST COAST GROWERS & PACKERS, INC. Selma, Calif

U. S. Non-seasonal Canned Food Packs—Thousands of Cases

Year	BABY FOODS (24/2s) 4-5 Oz.	8-8 Oz.	TOTAL	SEAFOODS (VARIOUS SIZE CASES) Salmon	Sardines	Tuna	Other ex. soup/pet	TOTAL	MEATS (48-lb., Excluding SOUPS, SPAGHETTI PACKS) Lunch Meat	Hams	Corned Beef Hash	Chili Con Carne	Vienna Sausage	Stews	Other Meats	TOTAL
1941	3,650	250	3,900	7,832	8,172	2,932	2,831	21,787	2,500	300	1,400	800	2,500	300	6,600	14,400
1942	5,000	750	5,750	5,835	6,618	2,485	2,387	17,325	8,100	1,600	400	200	2,600	100	7,700	20,700
1943	6,080	1,260	7,340	5,704	5,860	2,696	2,096	16,356	12,300	4,700	800	600	2,500	---	19,500	40,400
1944	8,340	1,880	10,220	5,139	6,913	3,560	2,528	18,140	21,000	4,200	3,600	2,200	5,200	---	51,800	88,000
1945	11,460	2,490	13,950	4,908	6,491	4,532	2,064	17,995	10,900	2,000	2,300	1,700	1,400	1,200	19,500	39,000
1946	12,760	3,020	15,780	4,510	6,253	4,784	3,716	19,263	10,600	2,000	1,400	1,500	900	800	9,800	27,000
1947	9,320	2,560	11,880	5,641	4,667	5,894	2,576	18,778	6,000	2,100	2,200	1,400	1,700	800	6,100	20,300
1948	12,660	4,240	16,900	4,825	6,338	7,038	3,187	21,386	6,500	2,300	1,900	1,700	1,300	900	7,400	22,000
1949	11,770	4,660	16,430	5,525	6,843	7,290	3,147	22,805	6,600	2,900	1,400	1,800	1,200	600	6,500	21,000
1950	12,700	4,770	17,470	4,310	8,915	9,017	3,762	26,004	7,200	3,600	1,500	2,200	1,100	1,000	9,100	25,700
1951	11,620	4,450	16,070	4,646	4,542	8,237	3,650	21,075	7,100	3,800	1,600	2,200	1,100	1,600	10,100	27,700
1952	13,130	4,840	17,970	4,464	3,638	8,894	4,418	21,414	7,300	3,600	1,500	2,000	1,100	1,000	8,200	24,700
1953	14,710	6,460	21,170	3,900	3,800	9,770	3,265	20,735	6,500	4,100	1,400	2,300	1,100	1,500	10,600	27,500
1954	14,930	6,250	21,180	4,163	4,273	10,889	3,609	22,934	6,600	4,200	1,500	2,500	1,200	1,500	10,000	27,500
1955	14,910	6,370	21,280	3,289	2,683	9,938	3,717	19,627	7,100	5,000	1,600	3,100	1,300	2,000	12,800	32,900
1956	14,860	6,980	21,840	3,505	2,986	11,834	4,369	22,694	7,100	5,100	1,700	3,000	1,300	2,100	12,600	32,900
1957	a	a	27,000x	3,207	2,716	11,903	4,442	22,268	6,000	4,600	1,600	3,100	1,400	1,900	12,300	30,900
1958	a	a	35,160x	3,705	4,323	14,203	3,168	25,401	6,000	5,400	1,500	3,000	1,200	2,100	12,900	32,100
1959	a	a	35,000x	2,465	2,508	14,332	3,917	23,222	6,300	5,700	1,500	2,900	1,200	2,200	12,800	32,600
1960	a	a	36,000x	2,912	2,614	15,305	3,899	24,730	6,100	6,200	1,400	3,000	1,200	2,400	13,800	34,100

Year	MILK (48/14½ oz.) Condensed	Evaporated	TOTAL	NATIONALITY (VARIOUS) Chinese	Other	TOTAL	SPAGHETTI (VARIOUS) Spagh. & Meat	Spagh. Non-meat	Other Paste	TOTAL	POULTRY 24/1-Lb.	SOUPS (LARGELY 24/2s) Meat	Seafood	Tomato	Other	TOTAL
1941	2,700	74,630	77,330	a	a	a	a	a	a	a	60	9,510	890	13,200w	11,160w	34,500
1942	1,550	80,890	82,440	a	a	a	a	a	a	a	50	8,000	650	12,800w	6,220w	27,670
1943	2,720	70,280	73,000	a	a	a	a	a	a	a	40	7,280	360	7,550	7,800	22,990
1944	3,200	78,800	82,010	a	a	a	a	a	a	a	1,080	10,120	380	8,400	10,770	29,670
1945	3,300	86,810	90,110	a	a	a	a	a	a	a	1,950	11,330	560	9,850	10,810	32,550
1946	2,630	70,130	72,760	a	a	a	a	a	a	a	1,670	13,090	1,220	13,850	19,640	47,800
1947	3,790	73,750	77,540	a	a	a	d	6,285d	a	6,285m	1,200	13,970	1,180	10,100w	16,950	42,200
1948	2,910	78,190	81,100	a	a	a	590	5,000w	a	5,590m	2,100	15,060	1,020	11,400w	16,520w	44,000w
1949	2,320	63,850	66,170	a	a	a	640	5,000w	a	5,640m	1,800	13,620	910	11,200w	17,270	43,000w
1950	1,400	66,800	68,200	a	a	a	1,070	5,500w	a	6,570m	2,200	17,230	1,110	11,900w	14,760w	45,000w
1951	1,350	66,590	67,940	a	a	a	1,290	6,000w	a	7,290m	2,400	14,800	1,150	d	28,050d	44,000w
1952	1,250	65,290	66,540	a	a	a	820	5,500w	a	6,320m	2,700	14,100	1,350	d	29,550d	45,000w
1953	950	58,700	59,650	a	a	a	1,120	6,000w	a	7,120m	2,500	19,630	1,390	d	28,980d	50,000w
1954	580	58,360	58,940	1,916	a	1,916m	1,202	6,862	a	8,064m	2,400	15,830	1,310	d	27,960d	45,100
1955	770	59,310	60,080	2,000w	a	2,000m	1,390	7,000w	a	8,390m	2,500	19,800	1,360	d	27,840d	49,000w
1956	1,600	58,390	59,990	2,100w	a	2,100m	1,520	7,500w	a	9,020m	2,700	19,270	1,470	d	28,260d	49,000w
1957	1,380	56,270	57,650	2,300w	a	2,300m	1,700w	7,700w	a	9,400m	3,200	18,030	1,500	d	32,470d	52,000w
1958	1,310	52,830	54,140	5,287	a	5,287m	6,224	8,013	a	14,237	1,757	17,210	1,420	d	36,370d	55,000w
1959	1,410	52,100	53,510	5,000w	a	5,000m	7,230	8,000w	a	15,230	1,920	17,740	1,350	d	38,910d	58,000w
1960	1,600	49,940	51,540	5,500w	a	5,500w	6,840	8,000w	a	14,840m	2,690	17,880	1,435	d	41,585d	60,900w

Year	NON-SEASONAL VEGETABLES (24/2s) Prep. Dry Beans	Misc. Beans	Hominy	Mushrooms	Sweet Potatoes	White Potatoes	Sauerkraut	Others	TOTAL	PET FOODS (48/1-lb.) Fish	Meat	TOTAL	SHORTNG. & LARD (Various)	COFFEE	ALL OTHER	TOTALS Ext. Seas. Frts. & Vegs.
1941	34,500	6,500w	2,800	900	1,990	700w	8,210	a	55,600	1,010	11,000	12,010	a	a	a	a
1942	10,500	1,500w	3,000w	400	920	600w	3,520	a	20,440	110	990	1,100	a	a	a	a
1943	15,110	1,349	1,400w	400	1,210	---	3,720	a	23,189	---	---	---	a	a	a	a
1944	25,630	539	1,000w	400	1,680	---	3,240	a	32,489	---	---	---	a	a	a	a
1945	28,750d	d	1,800w	400w	3,070	100w	8,490	a	42,430	---	---	---	a	a	a	a
1946	38,380d	d	2,000w	500w	4,170	600	8,280	a	53,930	---	---	---	a	a	a	a
1947	28,520	8,660	4,270	670	1,680	900	4,240	a	48,940	910	7,990	8,900	11,400	28,400	a	275,823
1948	33,700wd	d	4,000w	700w	1,820	1,600	6,510	a	48,330	1,320	14,680	16,000	14,800	34,800	a	290,106
1949	34,200wd	d	4,000w	750w	3,150	1,500	7,810	a	51,410	1,930	22,070	24,000	17,200	33,900w	a	303,355
1950	35,900wd	d	2,000w	800w	4,250	1,560	8,900	a	53,410	2,720	24,240	26,960	20,400	34,600w	a	326,514
1951	36,000wd	d	2,500w	1,000w	3,250	1,300	7,240	a	51,290	2,340	21,130	23,470	16,800	36,000w	a	337,505
1952	38,000wd	d	2,500w	1,000w	4,990	2,580	7,120	a	56,190	3,500	25,290	28,790	18,600	38,000w	a	332,494
1953	40,000wd	d	3,000w	1,100w	4,880	2,790	8,230	a	60,000	3,880	24,570	28,450	18,800	40,600	a	336,525
1954	32,676	12,159	2,354	1,257	4,060	1,660	8,060	a	62,226	4,030	26,390	30,420	24,000	35,800	a	340,480
1955	34,000w	12,000w	2,500w	1,300w	5,050	2,710	7,600	a	65,160	5,340	28,360	33,700	23,800	37,600	a	356,037
1956	34,000w	12,000w	3,000w	1,400w	5,060	2,900	8,140	a	66,500	6,690	32,310	39,000	22,000	39,600	a	367,344
1957	35,000w	15,000w	3,000w	1,300w	5,350	3,240	7,930	a	70,820	7,220	32,990	40,210	20,800	40,200	a	376,748
1958	36,123	17,799	2,799	925	7,020	3,380	7,640	a	75,686	7,550	32,620	40,170	22,000	41,800	a	402,738
1959	36,000w	19,000w	3,000w	1,161	7,270	2,960	7,648	a	77,039	7,210	34,550	41,760	27,400	44,200	a	414,881
1960	36,000w	19,000w	3,000w	1,146	5,683	3,430	6,800w	a	75,059	8,783	33,907	42,690	23,300	42,800	a	414,149

a—not available. d—products combined as indicated. m—data incomplete; total of items shown only. w—partially or wholly estimated. x—includes juice and estimated meat packs.

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From Thornton's spacious, modern plant come the industry's finest canned fruits and vegetables; processed and rushed to you on the ultimate in up-to-date equipment. We are especially proud of our high quality fruit and tomato concentrates and our dehydrated tomato crystals — contact us and let us show you why.

THORNTON
CANNING COMPANY

P. O. Box 108, Thornton, California

U. S. Canned Food Marketing Statistics — Millions of Standard Cases

CANNED FRUITS (24/2½)

Year	Carry In	Pack	Total Supply*	Exports	Total Shipt.
1941-42	5.5	81.3	87.6	1.9	83.2
1942-43	5.4	58.9	64.9	0.7	61.7
1943-44	3.2	44.8	48.9	2.4	47.2
1944-45	1.8	56.4	58.5	2.5	57.0
1945-46	1.5	49.6	51.6	2.3	50.0
1946-47	1.6	83.7	85.3	4.4	80.5
1947-48	4.8	66.5	73.0	2.1	64.6
1948-49	8.4	63.6	75.9	1.5	64.4
1949-50	11.5	71.1	85.0	1.7	73.4
1950-51	11.6	76.0	89.8	2.2	80.9
1951-52	8.9	82.0	92.8	2.2	76.6
1952-53	16.2	78.3	95.0	3.0	81.8
1953-54	14.5	79.3	96.1	3.5	81.5
1954-55	14.6	83.5	99.0	4.2	85.3
1955-56	14.0	81.6	107.9	5.9	91.0
1956-57	16.9	96.8	115.1	7.9	90.6
1957-58	24.5	89.1	114.8	8.0	96.4
1958-59	18.4	89.6	108.9	6.1	90.4
1959-60	18.8	102.0	123.7	8.0	104.3
1960-61	19.5	101.7	123.2	8.3p	99.1

1958-59					
Apples	0.9	3.3	4.3	a	3.5
Applesauce	1.6	10.4	12/0	a	10.4
Apricots	0.6	1.9	2.5	a	2.4
Berries	0.1w	1.2	1.3	a	1.2
Cranberry	0.9w	3.1	3.6	a	3.1
Cherry, red	0.1	2.0	2.1	a	1.9
Cherry, swt.	0.2	1.0	1.1	a	0.8
Cocktail	2.2	10.7	12.9	1.5	10.6
Salad	0.3	0.6	0.9	a	0.7
Grapefruit	0.4	3.2	3.6	a	3.0
Other citrus	0.1	0.4	0.5	a	0.3
Olives	0.3	2.3	2.8	a	2.3
Peaches, clg.	2.5	17.5	20.0	2.2	17.0
Peaches, fr.	1.2	7.3	8.5	a	7.1
Pears	2.5	7.9	10.4	0.2	8.3
Pineapple	4.1	14.2	18.8	2.2	14.9
Purp. Plums	0.2	1.3	1.5	a	1.2
All Other	0.4w	1.3	2.1	a	1.7
TOTAL	19.4	89.6	108.9	6.1	90.4

1959-60					
Apples	0.8	3.7	4.5	---	3.7
Applesauce	1.6	11.4	13.0	---	11.5
Apricots	0.1	5.1	5.2	0.2	4.6
Berries	0.1	1.2	1.3	---	1.2
Cranberry	0.5w	3.7	4.2	---	3.2
Cherry, red	0.2	2.9	3.1	---	2.8
Cherry, swt.	0.3	0.7	1.0	0.1	0.9
Figs	0.2	0.3	0.5	---	0.4
Cocktail	2.3	12.1	14.4	1.8	12.2
Salad	0.2	0.9	1.1	---	0.8
Grapefruit	0.7	2.8	3.5	0.2	3.0
Other citrus	0.2	0.4	0.6	---	0.4
Olives	0.7	1.6	2.3	---	2.0
Peaches, clg	3.0	21.5	24.5	3.6	21.9
Peaches, fr.	1.4	7.8	9.2	---	7.1
Pears	2.1	9.5	11.6	0.3	9.3
Pineapple	3.9	14.2	19.0	1.7	15.3
Purp. Plums	0.3	1.7	2.0	---	1.7
All Other	0.2	1.4*	2.7	0.1	2.2
TOTAL	18.8	102.9	123.7	8.0	104.3

1960-61					
Apples	0.8	3.1	3.9	---	3.4p
Applesauce	1.5	11.8	13.3	---	11.5p
Apricots	0.6	6.1	6.7	---	4.9
Berries	0.1	0.8	0.9	---	0.7
Cranberry	1.0	2.3	3.3	---	2.6w
Cherry, red	0.3	1.6	1.9	---	1.8
Cherry, swt.	0.1	0.6	0.7	---	0.6
Figs	0.1	0.5	0.6	---	0.5
Cocktail	3.2	12.8	15.0	2.1p	11.9
Salad	0.3	0.8	1.1	---	0.7
Other Mxd.	0.1	0.3	0.4	---	0.3
Grapefruit	0.5	2.8	3.3	---	2.6p
Other citrus	0.2	0.4	0.6	---	0.5p
Olives	0.3	3.1p	3.4	---	2.7p
Peaches, clg.	2.6	21.6	24.2	4.1p	20.8
Peaches, fr.	2.1	8.4	10.5	---	8.2
Pears	2.3	8.5	10.8	0.2p	8.2
Pineapple	3.7	15.0	19.6	1.6p	14.6
Purp. Plums	0.3	0.4	0.7	---	0.7
All Other	0.4	0.8	2.3	0.3p	1.9w
TOTAL	19.5	101.7	123.2	8.3p	99.1

CANNED SEASONAL VEGETABLES (24/2)

Year	Carry In	Pack	Total Supply*	Exports	Total Shipt.
1941-42	9.3	141.3	151.0	5.8	145.9
1942-43	5.1	178.8	184.0	2.3	180.8
1943-44	3.2	159.8	163.0	8.1	156.6
1944-45	4.4	157.7	162.5	7.6	161.1
1945-46	1.4	162.2	164.0	3.8	160.0
1946-47	4.0	181.8	186.5	3.6	171.5
1947-48	15.0	145.5	161.6	5.3	146.1
1948-49	21.5	137.7	160.6	2.1	139.6
1949-50	21.0	145.7	168.4	1.8	148.9
1950-51	19.5	142.6	164.2	1.8	156.2
1951-52	8.0	185.1	196.3	3.1	172.2
1952-53	23.9	166.0	192.2	2.7	183.3
1953-54	28.9	161.4	192.6	2.9	183.9
1954-55	28.7	156.5	188.3	4.3	183.8
1955-56	22.5	166.5	192.6	3.7	170.9
1956-57	21.7	197.9	223.1	5.8	182.8
1957-58	40.3	176.6	220.2	5.1	183.2
1958-59	37.3	185.2	226.6	3.5	181.6
1959-60	45.0	174.6	223.1	4.5	191.9
1960-61	31.2	178.6	213.1	4.2w	187.9

1958-59					
Asparagus	1.6	6.2	7.8	1.0p	6.5
Bean, lima	0.6	2.5	3.1	---	2.6
Bean, snap	4.9	26.5	31.3	0.1	25.7
Beets	2.4	7.9	10.3	---	7.7
Carrots	1.1	3.2	4.3	---	3.0
Corn	4.5	27.1	31.6	0.2	29.3
Peas	7.5	29.6	37.1	0.3	28.3
Pumpkin	1.0	3.5	4.5	---	3.6
Spinach	1.7	5.2	6.9	0.1	5.8
Tomatoes	2.7	30.5	37.1	0.3	30.6
Tomato Products					
Paste	1.6c	10.9	12.8	0.6p	10.0
Puree	1.1	4.3	5.4	---	4.3
Catsup	1.4	4.6	6.0	---	4.0
Chili s.	0.2	0.7	0.9	---	0.7
Sauce	1.6c	12.2	13.8	0.4p	9.6
All Other	3.4w	10.3	13.7	0.5	9.9
TOTAL	37.3	185.2	226.6	3.5	181.6

1959-60					
Asparagus	1.3	5.8	7.1	1.5	6.0
Beans, lima	0.5	2.7	3.2	---	2.9
Beans, snap	5.6	25.3	30.9	0.7	27.1
Beets	2.6	7.9	10.5	---	8.2
Carrots	1.3	2.9	4.2	---	2.6
Corn	2.3	33.8	36.1	0.2	33.5
Peas	8.8	25.7	34.5	0.3	28.7
Pumpkin	0.9	3.7	4.6	---	3.8
Spinach	1.1	7.1	8.2	0.1	6.8
Tomatoes	6.5	24.1	33.8	0.4	30.5
Tomato Products					
Paste	2.8c	8.1	11.1	0.7	9.8
Puree	1.1c	3.5	4.6	---	4.3
Catsup +	2.0	4.1	6.1	0.5	5.4
Chili s.+	0.2	0.4	0.6	---	0.5
Sauce	4.2c	9.5	13.7	0.1	11.3
All Other	3.8w	10.0	13.9	---	11.0
TOTAL	45.0	174.6	223.1	4.5	191.9

1960-61					
Asparagus	1.1	6.5	7.6	1.4w	6.3
Beans, lima	0.3	3.1	3.4	---	2.8w
Beans, snap	3.8	27.2	31.0	0.7w	27.3
Beets	2.3	7.3	9.6	---	8.1
Carrots	1.6	4.1	5.7	---	4.2
Corn	2.6	28.9	31.5	0.2w	30.4w
Peas	5.8	23.5	29.3	0.3w	26.8
Pumpkin	0.8	4.1	4.9	---	3.8
Spinach	1.9	6.4	8.3	0.1w	6.2
Tomatoes	3.3	25.4	31.7	0.4w	27.4w
Tomato Products					
Paste	1.3c	9.8	11.3	0.5w	10.2w
Puree	0.3c	4.4	4.7	---	4.5
Catsup +	0.7	5.4	6.1	0.5w	5.0
Chili s. +	0.1	0.6	0.7	---	0.6w
Sauce	2.4c	10.8	13.2	0.1w	12.2w
All Other	2.4w	9.7	12.2	---	10.5w
Misc.	0.5c	1.4	1.9	---	1.6
TOTAL	31.2	178.6	213.1	4.2w	187.9

CANNED AND BOTTLED JUICES (24/2)

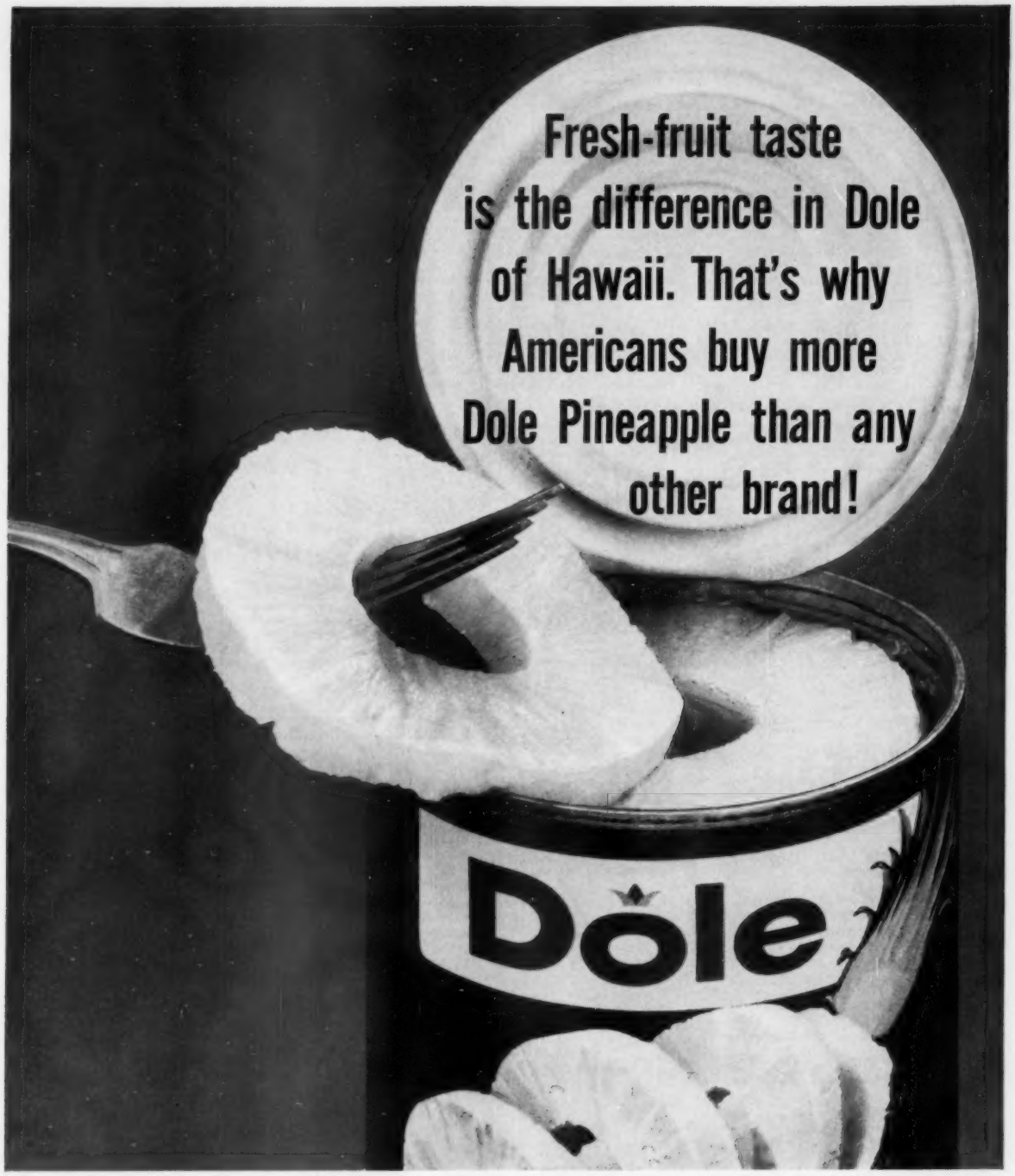
Year	Carry In	Pack	Total Supply*	Exports	Total Shipt.
1941-42	3.6	60.9	64.5	2.0	61.4
1942-43	3.1	74.3	77.4	0.5	75.5
1943-44	1.9	79.3	81.2	0.3	78.8
1944-45	2.4	95.7	98.1	0.6	95.5
1945-46	2.6	108.9	111.5	4.8	106.7
1946-47	4.8	105.5	110.3	8.7	100.3
1947-48	10.0	98.8	109.4	4.2	101.0
1948-49	8.4	97.2	106.9	5.7	97.6
1949-50	9.3	90.9	103.2	5.6	95.8
1950-51	8.2	108.9	121.4	7.6	110.3
1951-52	11.1	103.7	115.6	7.7	104.9
1952-53	11.7	108.6	120.3	8.3	106.7
1953-54	13.6	113.9	130.2	8.3	106.8
1954-55	23.4	97.8	122.4	8.7	106.1
1955-56	16.3	98.4	114.7	9.4	102.8
1956-57	13.1	123.9	137.3	12.2	114.7
1957-58	22.6	105.3	128.1	14.0	110.5
1958-59	17.6	109.7	127.5	a	105.9
1959-60	21.6	113.3	137.1	8.8	115.9
1960-61	21.2	111.8	135.2	a	115.5

1958-59					
Grapefruit	1.2	11.4	12.6	a	10.9
Lemon	0.3w	0.8	1.0	a	0.8
Orange	1.3	14.3	15.6	2.3p	14.2
Tangerine	---	0.8	0.8	a	0.6
Grpfrt-Org	0.1	4.3	4.5	a	4.1
CITRUS	2.9	31.6	34.5	a	30.6
Apple	0.4w	5.2	5.6	a	5.0
Grape	0.1w	5.4w	5.5	a	5.0
Nectars	0.7w	8.2	8.9	a	8.1
Prune	0.6w	6.6w	7.2	a	6.6
Pineapple	3.5	15.2	18.9	a	14.4
Misc.	---	a	a	a	a
FRUIT	5.3	40.6	46.1	a	39.1
Tomato	9.4	37.5	46.9	1.2	38.2
Other veg.	---	a	a	---	a
VEG.	9.4	37.5	46.9	a	36.2
TOTAL	17.6	109.7	127.5	a	105.9

1959-60					
Grapefruit	1.7	11.3	13.0	1.3	11.2
Lemon	0.2	0.7w	0.9	---	0.6
Orange	1.4	16.3	18.5	2.7	17.1
Tangerine	0.2	0.2	0.4	---	0.4
Grpfrt-Org.	0.4	4.5	4.9	0.9	4.2
CITRUS	3.9	33.0	37.7	4.9	33.5
Apple	0.6w	6.6	7.3	---	6.3
Grape	0.5w	7.8w	8.3	---	7.7
Nectars	0.8w	9.0w	9.8	0.6	9.2
Prune	0.6w	5.6w	6.3	---	6.1
Pineapple	4.5	12.2	17.9	0.9	12.7
Misc.	---	6.0	6.0	1.5	5.5
FRUIT	7.0	47.2	55.6	3.0	47.5
Tomato	10.7	31.1	41.8	0.9	33.1
Other veg.	---	0.2	0.2	---	1.8
VEG.	10.7	31.3	42.0	0.9	34.9
TOTAL	21.6	113.3	137.1	8.8	115.9

1960-61					
Grapefruit	1.8p	11.0	12.8	a	10.7w
Lemon	0.3p	0.7w	1.0	a	0.7w
Orange	1.4p	12.0w	13.9	2.2w	13.0w
Tangerine	---	0.6	6.9	a	0.5w
Grpfrt-Org.	0.7	3.3w	4.0	a	3.6w
CITRUS	4.2p	27.6	32.3	2.2	28.5
Apple	1.0w	6.2	7.3	a	6.7w
Grape	0.6w	8.2w	8.8	a	8.2w
Nectars	0.6w	9.0w	9.6	a	9.0w
Prune	0.2w	6.8w	7.1	a	6.7w
Pineapple	5.2	13.0	19.7	a	15.2w
Misc.	0.5w	6.0w	6.5	a	6.0w
FRUIT	8.1	49.2	59.0	----	51.8
Tomato	9.7	33.0	41.7	0.9w	33.2
Other veg.	0.2w	2.0w	2.2	a	2.0w
VEG.	8.9	35.0	43.9	0.9	35.2
TOTAL	21.2	111.8	135.2	a	115.5

a--Not Available. d, h, n--Products combined as indicated. w- Partially estimated p--Preliminary. c--California only *Includes imports
+--Canned catsup and chili sauce only, excluding glass.



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- PINEAPPLE SPEARS
- PINEAPPLE JUICE
- FRUIT COCKTAIL

U. S. Packs of Canned and Bottled Juices — Non-Frozen Single-Strength

Year	SINGLE-STRENGTH CITRUS JUICES (b) Grapefruit	Lemon	Orange	Tangerine	Orange Grapefruit	Orange-Tangerine	Tang. Grapefruit	CITRUS TOTAL	NON-CITRUS FRUIT JUICES Apple	Grape (w/b)	Nectars (w)	Pineapple (t/b)	Prune (w/b)	Other	TOTAL NON-CITRUS	VEGETABLE Tomato	Other	TOTAL ALL JUICES
TOTAL U.S. PACK (Thousands of Actual Cases)																		
1946	15,173	490	17,135	1,253	9,076	d		d43,127	3,524	3,710	1,400w	8,207	5,530	a	22,371	30,525	191	96,214
1947	14,869	774	23,993	556	10,568	137d		d50,897	1,181	3,975	5,029	8,890	4,680	a	23,755	16,880	200w	91,732
1948	12,803	637	18,039	995	9,457	244d		d42,175	1,181	3,870	1,900w	10,043	5,500w	a	22,494	23,701	200w	88,570
1949	10,795	838	17,667	1,351	6,492	42	213	37,338	2,761	3,350	3,000w	10,405	6,500w	a	26,016	20,560	300w	84,214
1950	16,298	513	20,871	1,009	8,269	---	23	46,983	3,470	6,340	5,000w	11,699	5,500w	200	32,209	22,741	300w	102,233
1951	8,469	680	19,126	421	5,615	8	26	34,345	3,174	3,800	4,600w	10,797	6,000w	200	28,571	31,626	300w	94,842
1952	10,515	960	17,822	633	5,263	1	---	35,194	3,199	5,370	4,500w	15,139	6,900w	200	35,308	31,417	300w	102,219
1953	14,638	459	17,491	679	5,577	---	---	38,844	3,081	6,370	5,000w	14,854	7,200w	200	36,505	32,733	300w	108,382
1954	11,041	734	18,771	360	4,363	---	---	35,269	4,219	7,154	11,103	14,292	7,519	200	44,487	23,466	496	103,718
1955	12,814	942	17,953	459	4,580	---	1	36,749	3,508	6,750	10,000w	14,213	7,700w	200	42,371	23,690	500w	103,319
1956	13,535	876	20,059	603	4,492	---	---	39,565	4,266	8,080	10,500w	14,855	9,300	200	47,201	38,017	300w	125,083
1957	9,335	1,013	18,562	247d	4,140	d		d33,297	4,653	6,120	11,500w	11,249	8,300	200	40,022	28,483	300w	102,102
1958	9,938	1,201	15,868	630	3,624	---	---	31,261	5,346	8,333	8,216	13,465	8,347	200	43,907	32,621	588	108,377
1959	9,862	1,000w	18,022	191	3,766	---	---	32,841	6,769	9,100w	10,000w	11,922	6,640w	6,000z	50,431	28,303	a	111,575
1960p	11,000w	1,300w	15,000w	480	3,260w	---	---	31,040	6,289	9,500w	10,000w	12,951	8,090w	6,000z	52,830	29,937	a	113,807
U.S. PACK BY REGIONS, 1959 (Thousands of Actual Cases)																		
Md.-Pa.-Va.	-----	-----	-----	-----	-----	---	---	-----	1,799	e	-----	-----	e	e	1,799	e	a	1,799
N. Y.	-----	-----	-----	-----	-----	---	---	-----	e	8,000e	-----	-----	e	e	8,000	1,883	a	9,883e
Other E.	-----	-----	-----	-----	-----	---	---	-----	e	e	-----	-----	e	e	a	e	a	e
East	-----	-----	-----	-----	-----	---	---	-----	1,799	8,000	-----	-----	e	e	9,799	1,883	a	11,682
Ind.	-----	-----	-----	-----	-----	---	---	-----	-----	-----	-----	-----	e	e	a	3,322	a	3,322
Mich.	-----	-----	-----	-----	-----	---	---	-----	1,082	d	e	-----	e	e	1,082	1,129	a	2,211
Other MW	-----	-----	-----	-----	-----	---	---	-----	e	d	e	-----	e	e	a	10,620e	a	10,620d
Midwest	-----	-----	-----	-----	-----	---	---	-----	1,082	d	e	-----	e	e	1,082	15,071	a	16,153
Fla.	8,109	-----	16,910	191	3,632	---	---	28,842	-----	-----	-----	-----	e	e	a	e	a	28,842
Texas	1,207	-----	456	-----	42	---	---	1,705	-----	-----	-----	a	e	e	a	e	a	1,705
Other S.	-----	-----	-----	-----	-----	---	---	-----	e	d	-----	-----	e	e	a	e	a	d
South	9,316	-----	17,366	191	3,674	---	---	30,547	e	d	-----	a	e	e	a	e	a	30,547
Calif.	546d	1,000w	656	-----	92	---	---	2,294	1,221	d	10,000e	-----	8,640e	e	17,861	11,349	a	31,504
Other W.	d	-----	-----		-----	---	---	-----	2,667e	1,100d	e	11,922	-----	6,000e	21,689	e	a	21,689
West	546	1,000	656	-----	92	---	---	2,294	3,888	1,100	10,000	11,922	8,640	6,000w	39,550	11,349	a	53,193
TOTAL	9,862	1,000	18,022	191	3,766	---	---	32,841	6,769	9,100w	10,000w	11,922	8,640	6,000	50,431	28,303	a	111,575
U.S. PACK BY REGIONS, 1960 (Thousands of Actual Cases)																		
Md.-Pa.-Va.	-----	-----	-----	-----	-----	---	---	-----	1,253	e	-----	-----	e	e	1,253	e	a	1,253
N. Y.	-----	-----	-----	-----	-----	---	---	-----	e	8,200e	-----	-----	e	e	8,200	e	a	8,200e
Other E.	-----	-----	-----	-----	-----	---	---	-----	e	e	-----	-----	e	e	a	e	a	e
East	-----	-----	-----	-----	-----	---	---	-----	1,253	8,200	-----	-----	e	e	9,453	e	a	9,453
Ind.	-----	-----	-----	-----	-----	---	---	-----	-----	-----	-----	-----	e	e	a	3,045	a	3,045
Mich.	-----	-----	-----	-----	-----	---	---	-----	839	d	e	-----	e	e	839	1,035	a	1,874
Other MW	-----	-----	-----	-----	-----	---	---	-----	----e	d	e	-----	e	e	a	13,915e	a	13,915
Midwest	-----	-----	-----	-----	-----	---	---	-----	839	d	e	-----	e	e	839	17,995	a	18,834
Fla.	9,408p	-----	13,890w	480p	3,128p	---	---	26,906	-----	-----	-----	-----	e	e	a	e	a	26,906
Texas	1,200w	-----	500w	---	52w	---	---	1,752	-----	-----	-----	a	e	e	a	e	a	1,752
Other S.	-----	-----	-----	-----	-----	---	---	-----	e	d	-----	-----	e	e	a	e	a	d
South	10,608	-----	14,390	480	3,180	---	---	28,658	e	d	-----	a	e	e	a	e	a	28,658
Calif.	392wd	1,300w	610w	-----	80w	---	---	2,382	979	d	10,000e	-----	8,090e	e	19,069	11,942	a	33,393
Other W.	d	-----	-----	-----	-----	---	---	-----	3,218e	1,300d	e	12,951	-----	6,000e	23,469	e	a	23,469
West	392	1,300	610	-----	80	---	---	2,382	4,197	1,300	10,000	12,951	8,090	6,000w	42,538	11,942	a	56,862
TOTAL	11,000	1,300	15,000	480	3,260	---	---	31,040	6,289	9,500w	10,000	12,951	8,090	6,000	52,830	29,937	a	113,807
U.S. PACK BY CONTAINERS, 1959 (Thousands of Actual Cases)																		
Indiv.	938	880w	4,545	2	45	---	---	6,410	497	-----	500w	475	-----	e	1,472	2,991	a	10,873
211-cyl.	38	-----	110	-----	6	---	---	152	61	-----	3,500w	1,370	-----	e	4,931	1,314	a	6,397
#303	-----	-----	-----	-----	-----	---	---	-----	-----	-----	-----	-----	-----	e	-----	2,233	a	2,233
#2	1,812	-----	2,665	26	633	---	---	---	-----	-----	-----	1,670	e	e	1,670	2,524	a	9,330
3-cyl.	6,871	-----	8,908	161	3,057	---	---	19,097	2,120	-----	3,100w	8,076	e	e	13,296	15,764	a	48,157
#10	29	d	27	-----	22	---	---	78	769	-----	e	237	e	e	1,006	258	a	1,342
Other	78	120dw	1,767	2	3	---	---	1,968	3,322	9,100	2,900e	94	6,640	6,000e	28,056	3,219	a	33,243
TOTAL	9,862	1,000	18,022	191	3,766	---	---	32,841	6,769	9,100	10,000w	11,922	6,640	6,000	50,431	28,303	a	111,575
U.S. PACK BY CONTAINERS, 1960 (Thousands of Actual Cases)																		
Indiv.	a	a	a	2	a	---	---	a	343	-----	a	629	-----	e	972	3,546	a	a
211-cyl.	a	a	a	-----	a	---	---	a	36	-----	a	1,730	-----	e	1,766	1,180	a	a
#303	a	a	a	-----	a	---	---	a	-----	-----	a	-----	-----	e	-----	2,135	a	a
#2	a	a	a	66	a	---	---	a	-----	-----	a	1,809	e	e	1,809	2,237	a	a
3-cyl.	a	a	a	412	a	---	---	a	2,100	-----	a	8,470	e	e	10,570	17,141	a	a
#10	a	a	a	-----	a	---	---	a	197	-----	a	224	e	e	421	421	a	a
Other	11,000w	1,300w	15,000w	-----	3,260w	---	---	31,040	3,613	9,500	10,000w	89	8,090e	6,000e	37,292	3,277	a	113,807
TOTAL	11,000p	1,300p	15,000p	480p	3,260p	---	---	31,040	6,289	9,500	10,000w	12,951	8,090	6,000w	52,830	29,937	a	113,807
U.S. PACK IN STANDARD CASES (Thousands of Cases, 24/2 equivalent)																		
1951	9,235	450	20,936	456	6,640	a	a	37,717	3,020	a	a	12,227	a	a	a	36,160	a	a
1952	11,641	692	18,871	748	6,127	a	a	38,079	3,119	a	a	16,928	a	a	a	35,807	a	a
1953	15,951	319	18,622	800	6,528	a	a	42,220	3,021	a	a	16,375	a	a	a	37,754	a	a
1954	11,991	510	18,096	428	5,107	a	a	36,132	4,072	a	a	15,999	a	a	a	27,034	a	a
1955	13,766	653	16,603	355	5,388	a	a	36,965	3,355	a	a	16,222	a	a	a	26,921	a	a
1956	14,229	620	17,639	715	5,298	a	a	38,501	4,043	a	a	16,667	a	a	a	43,552	a	a
1957	10,707	708	18,349	302	4,959	a	a	35,025	4,426	3,800w	9,000w	12,511	7,400w	a	37,137	32,590	a	104,752
1958	11,387	838	14,255	760	4,353	a	a	31,583	5,236	5,400w	8,200	15,162	6,600w	a	40,598	37,467	a	109,648
1959	11,330	700w	16,280	230	4,540	---	---	33,080	6,560	7,800w	9,000w	13,440	5,600w	6,000w	48,400	31,120	a	112,600
1960p	12,400w	900w	12,000w	560	3,300w	---	---	29,160	6,240	8,200w	9,000w	14,390	6,800w	6,000w	50,630	33,010	a	112,810

a—Data not available. b—Pack year beginning year shown. d—Combined as indicated. w—Partially estimated. t—Pineapple juice pack includes Philippine production starting 1948. p—Preliminary.

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- **Brussels Sprouts**
- **Carrots**
- **Cauliflower** (Snowball Variety)
- **Fordhook Lima Beans**
- **Italian Green Beans**
- **Strawberries**
- **Peaches**
- **Peas** (Green)
- **Snap Beans—Blue Lake** (French & Regular Cut)
- **Speckled Butterbeans**
- **Spinach** (Leaf & Chopped)

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U. S. Packs of Juice Drinks and Concentrates — Non-frozen Canned and Bottled —

Year	SINGLE-STRENGTH JUICE DRINKS* Lemon-ade	Orange-ade	Other Single Flavor	Grapefrt.-Pineapple	Tropical Punch	Other Blends	Total Drinks	CONCENTRATES* Grape-fruit Juice	Lemon Juice	Lime Juice	Orange	Tan-gerine	Orange-Grpfrt.	Other Citrus	Grape	Lemon-ade	All Other	Total Conc.
1946-47	a	a	a	-----	a	a	1,700w	43	244	-----	4,779	---	---	a	a	a	a	5,066
1947-48	a	a	a	-----	a	a	1,800w	1,667	446	-----	4,667	---	---	a	a	a	a	6,780
1948-49	a	a	a	-----	a	a	2,000w	150	579	-----	4,667	---	---	a	a	a	a	5,396
1949-50	a	a	a	-----	a	a	2,500w	232	523	-----	4,745	---	---	a	a	a	a	5,500
1950-51	391	a	a	-----	a	a	3,000w	344	280	-----	5,781	---	---	a	a	391	a	6,796
1951-52	422	3,000w	a	-----	a	a	4,000w	144	405	-----	3,509	---	---	a	a	422	a	4,480
1952-53	485	4,000w	a	-----	a	a	5,200w	271	589	-----	3,988	---	---	a	a	485	a	5,333
1953-54	476	4,633	a	-----	a	a	6,000w	319	489	-----	3,685	---	---	a	a	476	a	4,969
1954-55	271	5,076	a	1,000w	a	a	7,000w	257	586	-----	4,268	----	---	a	a	271	a	5,382
1955-56	368	6,087	a	3,000w	a	a	11,000w	308	545	-----	4,645	25	---	a	a	368	a	5,891
1956-57	49	6,463	a	6,034	a	a	16,000w	315	1,094	-----	5,609	32	---	a	a	224	a	7,274
1957-58	a	6,358	a	9,794	a	a	21,000w	355	1,350w	-----	3,251	a	---	a	a	448w	a	5,404
1958-59	d	5,959	d	12,970	d	14,071w	33,000	442	695	-----	4,276	23	---	---	20,067	a	a	25,503
1959-60	d	5,595	d	12,934	d	18,852	37,381	a	a	-----	a	a	---	---	24,198	a	a	a
1960-61p	d	6,000w	d	14,000w	d	19,500w	39,500	a	a	-----	a	a	---	---	23,825	a	a	a
U.S. Packs of Juice Drinks and Concentrates by Regions--1958-59																		
Calif.	d	e	d	e	d	e	e	277	695	-----	3,729	---	---	---	---	a	a	4,701
Florida	d	e	d	e	d	e	e	165	---	-----	547	23	---	---	---	a	a	735
Other	d	5,959e	d	12,970e	d	14,071e	33,000e	---	---	-----	---	---	---	---	20,067	---	a	20,067
TOTAL	d	5,959	d	12,970	d	14,071	33,000	442	695	-----	4,276	23	---	---	20,067	a	a	25,503
U.S. Packs of Juice Drinks and Concentrates by Regions--1959-60																		
Calif.	d	e	d	e	d	e	e	a	a	-----	a	---	---	---	---	a	a	a
Florida	d	e	d	e	d	e	e	27	---	-----	378	---	---	---	---	a	a	405
Other	d	5,595e	d	12,934e	d	18,852e	37,381e	---	---	-----	---	---	---	---	24,198	---	a	24,198
TOTAL	d	5,595	d	12,934	d	18,852	37,381	a	a	-----	a	21p	---	---	24,198	a	a	a

U. S. Packs of Frozen Juices and Concentrates — Thousands of Gallons

Year	SINGLE-STRENGTH CITRUS JUICES Lemon	Orange	Other	Total	CITRUS JUICE CONCENTRATE Grapefruit	Lemon	Lime	Orange	Tan-gerine	Orange-Grapefrt.	All Other	Total	OTHER JUICES AND CONCENTRATES Grape Conc.	Lemonade Conc.	Limeade Conc.	Other Conc.	Single Strength	Total
1946-47	151	316	2	469	---	---	---	559	---	---	---	559	a	a	a	a	a	a
1947-48	231	832	2	1,065	---	---	---	2,373	---	---	---	2,373	a	a	a	a	a	a
1948-49	179	528	---	707	116	---	---	12,196	---	112	---	12,424	a	a	a	a	a	a
1949-50	549	432	---	981	1,665	91	---	25,137	---	1,336	---	28,229	1,014	1,702	a	a	a	2,716
1950-51	455	202	4	661	188	205	---	34,938	---	245	---	35,576	1,552	3,437	a	a	a	4,989
1951-52	805	264	---	1,069	1,098	317	---	47,743	348	536	---	50,043	2,457	5,751	a	a	a	8,208
1952-53	900	157	a	1,057	1,226	574	---	51,264	551	480	---	54,095	a	8,628	210	a	a	8,838
1953-54	984	39	---	1,023	1,677	1,316	---	66,978	443	965	---	71,379	a	9,845	a	a	a	9,845
1954-55	794	382	---	1,176	1,155	908	---	68,558	877	561	---	72,059	a	8,268	992	a	a	9,260
1955-56	1,167	393	---	1,560	2,542	854	---	74,061	619	954	---	79,030	a	10,388	1,320	a	a	11,708
1956-57	1,210	495	---	1,705	2,949	1,691	---	75,067	793	597	---	81,097	a	10,051	684	a	a	10,735
1957-58	573w	288	a	861	3,330	1,575w	---	58,631	146	507	---	64,189	a	11,850w	438	a	a	12,288
1958-59	588	d	624d	1,222	4,998	2,216	---	83,599	1,152	690	---	92,655	d	12,807	885	814d	a	14,506
1959-60	d	d	1,139d	1,139	1,639	2,000w	---	81,101	320	284	---	85,344	d	12,000w	893	1,911d	a	14,804
1960-61	a	a	a	a	3,900p	a	---	87,000w	1,225p	240p	---	94,000w	d	a	a	1,425d	a	a
U.S. Packs of Frozen Juices and Concentrates by Regions--1958-59																		
Calif.	588	d	624d	1,222e	46	2,216	---	3,688	---	---	---	5,950	---	12,807	---	---	a	12,807
Florida	---	d	d	e	4,952	---	---	79,911	1,152	690	---	86,705	---	-----	885	---	a	885
Other	---	---	---	---	---	---	---	-----	---	---	---	-----	d	-----	---	814d	a	814
TOTAL	588	d	624	1,222	4,998	2,216	---	83,599	1,152	690	---	92,655	d	12,807	885	814	a	14,506
U.S. Packs of Frozen Juices and Concentrates by Regions--1959-60																		
Calif.	d	d	1,139d	1,139e	26	2,000w	---	2,952	---	---	---	4,978	---	12,000w	---	---	a	12,000
Florida	---	d	d	e	1,613	---	---	78,149	320	284	---	80,366	---	-----	893	---	a	893
Other	---	---	-----	---	---	---	---	-----	---	---	---	-----	d	-----	---	1,911d	a	1,911
TOTAL	d	d	1,139d	1,139	1,639	2,000w	---	81,101	320	284	---	85,344	d	12,000	893	1,911	a	14,804

a--Not available. d--Products combined as indicated. e--Areas combined as indicated. p--Preliminary. w--Estimated. x--Includes glass. z--Four-to-one concentrate, derived from data by N.Y. State Canners & Freezers Assn. of cases of 24/2s, concentrates in thousands of gallons. *Single strength juice-drinks reported in thousands

RICHMOND-CHASE COMPANY
Heart's Delight
APRICOT NECTAR
APRICOT PULP & JUICE, WATER, SUGAR & CITRIC ACID
Diet Delight
SPECIAL DIETETIC PACK
CLING PEACHES
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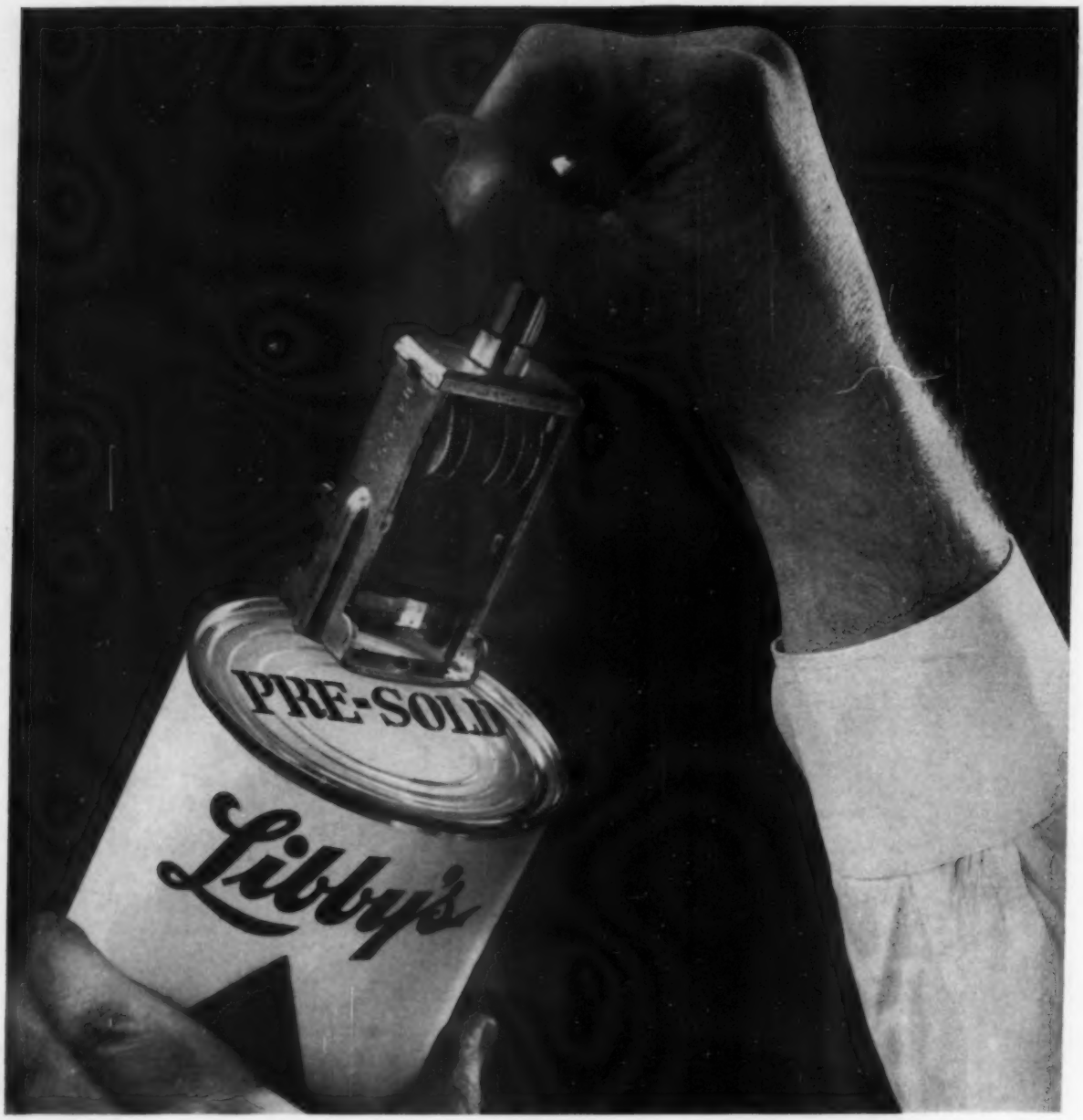
FRUITS-VEGETABLES
These Nationally Advertised Favorites:
HEART'S DELIGHT FRUIT NECTARS
HEART'S DELIGHT JUICE
HEART'S DELIGHT FRUITS AND VEGETABLES
DIET DELIGHT DIETETIC FRUITS, VEGETABLES AND NECTARS
Packed by
Richmond-Chase Company, San Jose, Calif.
BUILDING GREATER SALES THROUGH NATIONAL ADVERTISING



QUALITY The Libby line comes to market *pre-sold* by a 93-year reputation for picking, processing and packing only the best. Careful quality control every step of the way.

DIVERSIFICATION Libby's is the world's most diversified packer of canned and frozen foods. Over 300 Famous Foods in the Libby Line to meet the nation's, and the world's, needs.

MARKETING Libby's advertising, merchandising and promotion, based on appetite appeal and service *ideas*, are continually building acceptance for the convenience and nutrition of canned and frozen foods.

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WESTERN CALIFORNIA CANNERS, INC.

Antioch, California

GROWERS AND PACKERS

ASPARAGUS
TOMATO CATSUP
TOMATO SAUCE
TOMATO PUREE
TOMATO PASTE
TOMATOES
CARROTS

"RICHFIELD"
"RIALTO"
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Also packed under private label for quality-conscious buyers

Sales Agents:

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268 Market St., San Francisco 11, Calif.
YUkon 6-1431

Sixteen Frozen Vegetable Packs to Please Your Trade

- **Consumer**
- **Institutional**
- **Reprocessors**

Asparagus	Mixed Vegetables
Baby Lima Beans	Peas
Regular Cut Beans	Peas and Carrots
Chopped Broccoli	Leaf Spinach
Broccoli Spears	Chopped Spinach
Sliced Carrots	French Fry Potatoes
Diced Carrots	Cauliflower
Cut Corn	Succotash

Packed Under Continuous Inspection of the U.S.D.A.

California Frozen Foods, Inc.

FAIR ACRES brand

P. O. Box 1492 **Modesto, Calif.**

PATTERSON FROZEN FOODS, INC.

PATTERSON, CALIFORNIA

Packer of the FINEST because . . .

√Located in Fertile San Joaquin Valley, with crops one to four miles from plant
√Specializing in private label packing of California vegetables, and the World's finest Baby Lima Beans
√One of the most modern plate freezing systems
√Bacteria testing laboratory
√Our own freezers and storage facilities — — enabling us to economically produce high quality products

Baby lima beans
Fordhook lima beans
Green beans
Italian beans
Broccoli
Brussels sprouts
Cauliflower
Mixed vegetables
Peas and carrots
Spinach
Zucchini squash
Apricots
Strawberries

PACKED UNDER
USDA CONTINUOUS INSPECTION

Exclusive Sales Agents

W. G. SWANSON COMPANY

24 CALIFORNIA ST. **DOuglas 2-6446** **SAN FRANCISCO, CALIF.**

U. S. Frozen Fruit Packs—Millions of Pounds

Year	BERRIES										OTHER FRUITS									GRAND TOTAL
	Black	Blue	Boysen	Goose	Logan	Black Rasp.	Red Rasp.	Straw	Misc.	TOTAL	Apples & Sauce	Apricots	Red Cher.	Sweet Cher.	Currants	Grape	Peach	Pineapple	Plums	Misc.	
TOTAL U.S. PACK (MILLIONS OF POUNDS)																				
1939	7.4	1.1	0.3	0.1	1.4	2.0	8.4	50.8	5.5	77.0	2.1	0.3	39.7	...	1.3	8.8	6.8	...	0.2	2.9	139.1
1940	9.6	2.6	0.2	0.1	2.5	2.5	14.0	62.3	11.4	105.2	4.0	0.2	40.0	0.1	0.4	10.0	5.4	...	0.2	4.1	169.6
1941	9.0	2.2	1.7	0.1	3.5	8.1	14.2	79.5	2.8	121.1	10.0	0.7	43.2	0.5	2.0	16.8	6.6	0.1	0.3	5.3	206.6
1942	10.0	3.4	2.1	0.6	2.8	6.2	15.5	63.8	2.1	106.5	15.1	5.3	52.5	0.2	3.5	19.6	14.3	0.3	3.0	5.5	225.8
1943	11.7	7.4	3.8	1.5	1.8	6.5	17.1	34.2	2.3	86.3	41.9	19.9	31.2	0.6	2.7	17.9	24.0	0.7	24.6	5.0	254.8
1944	17.5	5.1	4.2	1.8	3.3	5.6	13.6	35.4	3.2	89.7	55.2	42.6	56.3	1.4	4.8	9.8	45.7	0.9	18.2	8.9	333.5
1945	21.5	7.8	7.1	1.6	2.5	3.5	13.3	37.4	2.6	97.3	93.0	65.2	16.1	10.3	2.7	10.2	103.6	3.3	20.0	10.6	432.3
1946	19.8	10.2	10.9	1.4	3.4	5.5	23.9	78.8	2.5	156.4	78.2	43.6	88.1	7.8	4.2	12.4	65.1	23.0	16.7	27.3	522.8
1947	14.5	5.4	12.8	0.1	2.4	7.1	25.4	109.0	1.4	176.1	28.6	6.3	67.0	0.7	4.1	21.0	27.0	5.9	2.9	7.1	348.7
1948	9.7	7.7	9.1	...	4.2	4.5	23.2	161.8	1.2	221.4	27.6	2.5	87.8	0.6	3.9	5.5	13.6	3.7	2.2	8.5	377.3
1949	15.2	14.0	14.1	...	3.4	6.2	25.7	107.6	0.6	186.8	52.3	2.1	71.0	3.0	2.5	3.1	23.2	1.0w	5.3	0.7	351.0
1950	9.0	10.9	9.4	0.2	2.6	10.9	20.4	192.7	0.4	256.5	48.0	7.8	104.5	0.7	1.3	15.2	25.8	1.5w	5.2	7.2	473.7
1951	14.6	13.9	9.3	0.1	2.4	9.6	19.4	157.7	0.1	227.1	28.8	9.9	99.3	2.3	1.5	4.8	32.4	d	6.8	3.0d	415.9
1952	10.6	9.8	9.7	0.1	1.8	9.0	18.4	200.3	...	259.7	37.6	4.2	61.9	2.4	2.9	4.9	35.5	d	3.6	7.6d	420.3
1953	18.0	14.0	9.7	0.1	2.3	9.0	24.9	226.0	...	314.0	42.4	4.0	115.2	1.7	3.8	10.1	32.2	a	8.4	20.3	542.0
1954	14.2	21.0	12.7	0.2	2.6	8.3	23.5	221.4	0.1	304.0	60.0	5.4	86.7	3.6	2.0	9.4	36.4	a	4.5	10.7	523.0
1955	16.5	21.0	16.6	0.8	1.9	8.2	25.7	273.0	0.1	363.8	72.8	12.3	114.5	2.8	2.0	11.1	50.6	a	3.8	26.1	659.8
1956	12.8	19.6	18.1	0.3	1.4	7.8	9.2	312.3	...	381.5	87.0	4.6	88.7	5.2	2.5	14.9	45.5	a	4.0	60.4	694.3
1957	19.1	24.4	13.4	0.2	1.3	15.1	30.4	259.3	...	363.2	69.2	8.3	130.6	4.1	1.7	15.5	44.5	a	1.3	33.0	671.4
1958	13.6	16.0	19.8	1.0	1.5	13.1	24.5	261.5	...	351.0	67.4	6.9	86.2	6.1	1.4	20.4	43.8	a	3.6	24.1	610.4
1959	15.8	16.4	13.1	0.3	1.0	10.2	24.7	248.2	...	329.7	72.3	7.5	107.4	1.8	2.0	13.2	47.3	a	2.4	34.0	617.6
1960	27.0	25.2	10.2	0.6	1.8	9.3	28.0	217.5	...	319.6	69.8	15.3	129.0	0.8	1.2	14.9	72.9	a	2.1	34.1	659.7
U.S. PACK BY REGIONS, 1959 (MILLIONS OF POUNDS)																				
N.Y.	...	f	...	...	...	0.6	0.2e	1.5	...	2.3	27.5	...	26.6	a	e	...	e	a	e	a	56.4*
Other	e	11.1f	e	...	...	1.2e	...	1.8	...	14.1	1.5	...	5.2e	a	0.3	10.4	1.8e	a	0.5e	0.7	34.5
N.E.	e	11.1fe	e	...	...	1.8e	0.2e	3.3	...	16.4	29.0	...	31.8e	a	0.3e	10.4	1.8e	a	0.5e	0.7	83.3
Midwest	e	4.5	e	...	e	3.2	0.9	17.2	...	25.8	24.2	...	71.5	a	1.2	2.8e	6.0	a	e	0.3	137.7*
South	0.2e	e	e	...	...	e	e	17.0	...	17.2	3.2	...	e	a	...	e	2.1	a	...	9.4	32.5*
Calif.	2.6	...	9.4	...	...	...	...	82.9*	...	91.6	15.6	6.7*	...	e	...	...	35.7	a	6.2*	2.8	152.3
Wash.-Ore.	13.0	0.8	3.4	0.3	0.9	5.0	23.3	131.1	...	177.8	...	1.3	2.1	1.8e	0.4	..	0.4	a	1.5	3.4	188.7
Other West	...	...	0.3e	...	0.1e	0.2	0.3	...	...	0.9	0.3	...	2.0	a	0.1	e	1.3	a	...	17.4	22.0
West	15.6	0.8	13.1	0.3	1.0	5.2	23.6	210.7*	...	270.3	15.9	7.5*	4.1	1.8	0.5	e	37.4	a	1.9	23.6	364.1*
TOTAL	15.8	16.4	13.1	0.3	1.0	10.2	24.7	248.2	...	329.7	72.3	7.5	107.4	1.8	2.0	13.2	47.3	a	2.4	34.0	617.6
U.S. PACK BY REGIONS, 1960 (MILLIONS OF POUNDS)																				
N.Y.	---	---	---	---	---	a	a	a	---	a	a	---	a	a	a	---	a	---	a	---	---
Other	e	---	e	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N.E.	e	14.4	e	---	---	0.4e	e	2.3	---	17.1	26.9	---	21.3e	a	0.5	3.6	6.1	a	0.7e	0.5	76.7
Midwest	0.1	8.9	e	---	e	4.9	0.5e	12.7	---	27.1	22.6	---	102.8	a	0.2	10.3e	7.0	a	e	2.0	172.0
South	0.4e	0.4	e	---	---	e	e	21.6	---	22.4	3.2	---	e	a	---	e	7.8	a	---	8.7	42.1
Calif.	3.7	---	8.2	---	0.3	---	---	79.7*	---	91.9	12.3	12.9**	--	e	---	---	49.9	a	3.2*	3.9	174.1*
Wash.-Ore.	22.5	1.5	2.0	0.6	1.5	2.9	25.5	107.2	---	163.7	---	2.6	2.5	0.8e	0.5	---	0.1	a	0.3	4.6	175.1*
Other West	0.3	---	---	---	---	1.1	2.0	---	---	3.4	4.8	---	2.4	a	---	1.0	2.0	a	---	14.4	28.0
West	26.5	1.5	10.2e	0.6	1.8e	4.0	27.5	180.9	---	253.0	17.1	15.3	4.9	0.8	0.5	1.0	52.0	a	1.4	22.9	368.9*
TOTAL	27.0	25.2	10.2	0.6	1.8	9.3	28.0	217.5	---	319.6	69.8	15.3	129.0	0.8	1.2	14.9	72.9	a	2.1	34.1	659.7
U.S. PACK BY CONTAINERS, 1959 (MILLIONS OF POUNDS)																				
20 Oz--less	0.7e	0.9	1.5	...	...	...	10.5	102.2	...	115.8	...	...	1.1	...	...	...	4.5	a	...	5.1	126.8
10#--less	e	0.1	0.3	...	...	...	0.7	20.0	...	21.1	0.5	...	...	...	...	...	9.3	a	...	5.0	38.2
30#	7.2	8.5	6.7	...	0.6	4.9	6.7	104.3	...	138.9	65.8	3.4	100.6	0.1	...	0.9	26.3	a	1.3	20.9	358.9
Others-lge.	3.3	6.9	2.7	...	0.2	...	4.5	6.7	..	24.4	6.0	...	...	...	...	...	7.2e	a	...	1.1	48.5
Barrels	4.6	...	1.9	...	0.2	3.0	2.2	15.0	...	26.9	...	...	3.9	1.6	0.6	6.8	e	a	1.0	1.9	45.2
Misc.	...	...	...	0.3	...	2.3	...	...	...	2.6	...	4.1	1.8	0.1	1.4	5.5	...	a	0.1	...	S
TOTAL	15.8	16.4	13.1	0.3	1.0	10.2	24.7	248.2	...	329.7	72.3	7.5	107.4	1.8	2.0	13.2	47.3	a	2.4	34.0	617.6
U.S. PACK BY CONTAINERS, 1960 (MILLIONS OF POUNDS)																				
20 Oz--less	0.8e	1.7	1.1	...	...	...	11.1	92.8	...	107.5	...	...	1.2	...	...	...	4.8	a	...	8.3	121.8
10#--less	e	0.7	0.3	...	...	...	1.1	20.3	...	22.4	2.6	...	...	...	...	...	10.8	a	...	5.9	41.7
30#	15.2	11.6	7.1	...	1.1	5.2	10.5	89.8	...	140.5	55.7	8.2	120.5	0.4	...	1.0	42.5	a	1.6	13.2	383.6
Others-lge.	4.3	11.2	0.6	...	0.4	1.2	4.8	4.6	...	27.1	11.5	...	...	...	...	...	14.8e	a	...	5.3	58.7
Barrels	6.7	...	1.1	...	0.3	2.9	0.5	10.0	...	21.5	...	...	4.1	0.3	0.4	7.3	e	a	0.5	1.4	39.5
Misc.	...	...	...	0.6	...	...	...	...	...	0.6	...	7.1	3.2	0.1	0.8	6.6	...	a	...	...	18.4
TOTAL	27.0	25.2	10.2	0.6	1.8	9.3	28.0	217.5	...	319.6	69.8	15.3	129.0	0.8	1.2	14.9	72.9	a	2.1	34.1	659.7

e--Regions or sizes combined as indicated. *--Includes some quantities not reported by NAFFP. f--Regions combined as indicated. a--Not available. d--Products combined as indicated. w--Partially estimated. S--Included in above totals.

Diana

Cherries in Brine
Maraschino Cherries
Glace Cherries
Cherries for
Fruit Cocktail

•

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Quality packers since 1921

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Fruit and Pot Pies come
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FRUIT PIES: Apple . . Boysenberry . . Cherry
POT PIES: Beef . . Chicken . . Turkey

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PACIFIC COAST
RED TART CHERRIES
CANNED and FROZEN

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ASSOCIATION
EUGENE — OREGON
FINEST QUALITY RED TART CHERRIES
FROM THE LARGEST GROWING AREA ON THE
PACIFIC COAST

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FROZEN—
Packed halves and quarters, 9-oz. to the carton. Available under Queen's Delight brand or private label

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Packed in 6-oz. and 3½-lb. jars for retail and institutional sale, under Regina Mia brand.

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(Retail or Institutional)
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ANNOUNCING

THE CHANGE of the CORPORATE NAME of

FLOTILL PRODUCTS, INCORPORATED

Including:

FLOTILL PRODUCTS DIVISION

CANNED FRUITS, VEGETABLES AND TOMATO PRODUCTS

TILLIE LEWIS TASTI-DIET DIVISION

DIETETIC...LOW CALORIE...AND SPECIAL PURPOSE FOODS

to . . . TILLIE LEWIS FOODS, INC.

June 22, 1961

Stockton, California *Modesto, California*

U. S. Frozen Vegetable Packs—Millions of Pounds

Year	Asparagus	Snap Beans	Lima Beans	Broccoli	Brus. Sprouts	Carrots	Cauliflower	Corn (cut)	Corn (cob)	Peas (Green)	Peas & Carrots	Pumpkin	Rhubarb	Spinach	Succotash	Other Mixed	All Other	GRAND # TOTAL
TOTAL U.S. PACK (MILLIONS OF POUNDS)																		
1939	7.4	6.0	15.4	2.7	0.7	0.4	0.7	3.0	2.6	26.6	0.5	0.9	a	3.7	....	....	2.0	72.6
1940	5.9	6.0	16.8	1.9	0.8	2.0	0.7	4.5	2.9	35.8	0.4	0.6	a	4.1	....	....	0.9	83.3
1941	7.5	8.8	20.5	3.5	1.9	1.1	1.5	6.9	2.7	44.1	1.1	1.7	a	9.5	....	d	0.5d	111.3
1942	5.8	13.8	30.4	3.2	3.7	1.1	1.2	11.0	2.3	66.2	1.1	2.6	0.8	16.6	0.1	1.0	1.8	162.7
1943	11.7	26.5	23.7	5.5	5.9	2.9	3.5	21.5	0.8	75.6	8.3	12.2	4.4	29.7	0.2	2.2	2.7	237.3
1944	12.4	23.8	29.6	7.4	4.9	0.9	6.8	21.0	0.6	79.2	2.1	10.0	4.4	32.1	1.1	2.2	....	238.5
1945	20.6	31.5	28.5	11.9	6.6	6.0	7.5	25.6	0.5	103.8	5.3	7.4	6.9	36.7	1.8	5.6	1.8	308.0
1946	28.3	41.0	51.1	25.8	14.5	9.1	13.2	42.4	2.3	140.6	7.2	10.0	10.6	38.3	3.4	13.1	2.5	453.4
1947	10.7	31.2	68.2	10.6	4.6	2.9	5.3	26.6	6.1	131.8	5.3	5.2	1.5	23.3	3.8	6.0	5.0	348.1
1948	18.3	49.6	75.4	29.1	10.5	15.4	14.0	20.9	10.3	119.0	6.5	5.6	2.6	41.6	6.9	9.4	11.3	446.4
1949	18.4	58.5	87.9	45.2	23.5	12.8	21.7	37.1	17.6	113.3	8.1	8.3	4.2	62.3	8.3	15.9	20.4	563.5
1950	22.3	65.5	86.0	41.0	22.4	13.3	12.3	33.0	10.1	152.3	11.3	8.3	6.2	52.8	6.7	15.2	28.4	587.1
1951	23.5	81.6	108.0	48.8	22.5	10.6	22.5	44.5	8.8	195.5	13.0	12.7	5.8	97.9	11.9	26.1	36.3	770.0
1952	25.5	87.4	113.9	82.3	22.5	22.3	33.2	62.7	14.2	203.7	18.0	15.1	5.7	91.5	11.8	26.5	59.7	896.0
1953	32.9	114.9	138.5	89.0	40.8	29.3	35.7	104.8	17.2	233.0	19.5	9.4	8.3	87.9	14.1	30.9	97.2	1,103.3
1954	25.8	123.3	129.6	62.0	33.4	27.4	17.0	78.2	16.7	212.4	14.8	13.0	6.7	66.9	9.3	23.8	114.6	974.6
1955	28.7	121.0	117.7	96.2	23.1	34.4	40.1	70.0	6.9	231.2	13.9	17.9	5.6	110.3	7.2	30.7	184.8	1,139.7
1956	37.7	137.7	143.6	118.3	44.0	51.0	47.2	118.2	20.4	359.7	24.1	24.2	7.4	104.5	12.4	42.1	240.5	1,533.0
1957	31.2	134.4	131.4	80.5	33.4	34.2	22.7	112.9	13.7	295.8	21.0	13.2	4.7	102.1	10.0	41.5	283.9	1,366.6
1958	24.4	156.0	125.9	109.7	30.4	53.7	33.3	111.0	10.4	251.9	21.5	18.0	4.4	97.5	8.9	37.3	338.9	1,433.2
1959	32.7	149.0	114.0	103.2	38.7	55.5	33.6	121.0	9.9	305.0	20.3	15.7	4.6	121.9	6.4	34.1	461.0	1,626.6
1960	40.0	159.7	147.5	128.2	39.3	72.1	48.7	130.5	11.4	295.2	27.9	23.4	7.2	118.6	7.4	46.1	655.4	1,958.6
U.S. PACK BY REGIONS, 1959 (MILLIONS OF POUNDS)																		
N/E South	12.7	88.2	26.5	18.6	e	10.0	3.6e	27.7	2.5	47.7	2.8e	11.1e	0.7	49.0	1.7	2.0	179.9z	484.7
Midwest	0.9	1.4	3.1	e	...	...	e	31.8	1.4	27.0	e	e	0.8	...	2.1	5.6	7.6	81.7
Calif.	11.0	21.4*	70.5	67.0*	37.2	12.3	23.5	...	...	12.0	...	...	...	60.7	...	...	6.0y	321.6
Wash-Ore.	8.1	42.7*	...	17.9*	...	32.9	6.5	57.4	5.8	192.3	16.5	...	2.0	9.0	2.3	24.1	9.6y	426.8
Other West	...	...	13.9	...	1.5e	0.3	...	4.1	0.2	26.0	1.0	4.6	1.1	3.2	0.3	2.4	257.9zx	316.5
West	19.1	59.4	84.4	84.6e	38.7	45.5	30.0	61.5	6.0	230.3	17.5	4.6	3.1	72.9	2.6	26.5	273.5	1,060.2
TOTAL	32.7	149.0	114.0	103.2	38.7	55.5	33.6	121.0	9.9	305.0	20.3	15.7	4.6	121.9	6.4	34.1	461.0	1,626.6
U.S. PACK BY REGIONS, 1960 (MILLIONS OF POUNDS)																		
N/E South	14.5	103.2	35.0	22.6	e	9.2	8.9e	31.9	3.2	54.3	2.1e	12.3	1.1	45.1e	1.6	2.4	207.4ez	554.8
Midwest	0.8	1.1	4.4	e	...	8.8	e	23.2	2.4	21.1	e	1.7	0.9	e	2.6	8.4	e	75.4
Calif.	12.7	21.1	91.0	85.2	37.3	17.2	29.4	...	...	14.9	...	...	...	61.6	...	...	12.5y	382.9
Wash-Ore.	12.0	36.4*	...	5.8	...	36.9	4.6	70.5	5.4	181.2	18.9	...	...	8.1	...	30.2	42.9y	452.9
Other West	...	...	17.1	14.6e	2.0e	...	5.8	4.9	0.4	23.7	6.9	9.4	5.2	3.8	3.2	5.1	392.6	494.7
West	24.7	55.4	108.1	105.6e	39.3e	54.1	39.8	75.4	5.8	219.8	25.8	9.4	5.2	73.5	3.2	35.3	448.0z	1,328.4
TOTAL	40.0	159.7	147.5	128.2	39.3	72.1	48.7	130.5	11.4	295.2	27.9	23.4	7.2	118.6	7.4	46.1	655.4z	1,958.6
U.S. PACK BY CONTAINERS, 1959 (MILLIONS OF POUNDS)																		
1#-less	19.5	87.5	65.7	78.0	27.4	...	22.0	50.0	a	137.1	16.0	8.8	1.9	86.2	5.6	23.3	240.6	869.6
10#-less	11.2	27.5	19.3	24.2	11.2	1.9	11.6	13.6	a	35.2	2.0	6.7	0.4	34.7	0.7	6.5	22.8	229.5
30#	...	...	...	...	...	d	...	0.3	a	1.0	...	...	1.7	...	...	...	0.5	3.5
50#	...	18.3	7.2	...	...	27.5	...	14.5	a	59.3	...	...	...	...	...	...	6.4	133.2
Poly. Bags	...	...	1.9	...	...	...	...	1.8	a	8.2	2.1	...	...	...	...	2.3	2.8	19.1
Misc.	2.0	15.7	19.9	1.0	0.1	26.1	...	40.8	9.9a	64.2	0.2	0.2	0.6	1.0	0.1	2.0	187.9	371.7
TOTAL	32.7	149.0	114.0	103.2	38.7	55.5	33.6	121.0	9.9	305.0	20.3	15.7	4.6	121.9	6.4	34.1	461.0	1,626.6
U.S. PACK BY CONTAINERS, 1960 (MILLIONS OF POUNDS)																		
1#-less	24.9	94.1	82.3	97.1	28.2	d	33.9	41.1	a	107.9	21.4	15.2	2.6	85.2	6.5	27.3	259.3z	927.0
10#-less	11.3	28.9	23.3	30.2	11.1	3.7d	14.8	10.6	a	38.3	1.4	7.0	0.4	30.0	0.8	9.5	12.9	234.2
30#	...	...	...	...	...	0.1	...	0.1	a	0.8	...	...	3.5	...	...	...	...	4.5
50#	...	14.0	4.8	...	...	30.3	...	27.7	a	57.6	...	...	...	...	...	...	...	134.4
Poly. Bags	...	...	2.3	...	...	...	...	3.0	a	8.5	4.5	...	...	...	...	6.6	...	24.9
Misc.	3.8	22.7	34.8	0.9	...	38.0	...	48.0	11.4	82.1	0.6	1.2	0.7	3.4	0.1	2.7	383.2z	633.6
TOTAL	40.0	159.7	147.5	128.2	39.3	72.1	48.7	130.5	11.4	295.2	27.9	23.4	7.2	118.6	7.4	46.1	655.4	1,958.6

a--Not available. d--Combined as indicated. e--Regions combined as indicated. z--Predominantly potatoes. y--No potatoes. x--Includes Wash.-Ore. and Calif. potatoes. *Northwest report by NAFFP, plus California report by WFFPA, total more than West Total reported by NAFFP. #Canner/Packer totals may differ from NAFFP totals where NAFFP breakdown of production by areas or pack combines production figures from two or more regions, or of various packs into one total.

STATISTICS That You Can Depend On: The CANNER/PACKER Yearbook Number

The annual compilation of industry pack and marketing figures by CANNER/PACKER is intended to provide a ten-year history of most commodities which are canned, frozen, dried or glasspacked.

—See the index on Page 133

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Packers for Nationally Advertised Brands—

We offer private label facilities from three modern plants located in some of the nation's best growing areas.

Sales Handled by

SMITH SALES COMPANY

Pendleton, Oregon

U. S. Frozen Food Packs — Millions of Lbs.

Year	Fruits	Vegetables except Potatoes	Juices, Citrus	Juices, Other & Ades	Eggs	Fish	Meats (w)	Poultry (w)	Convenience Foods	All Other	TOTAL PACK
1946	532.8	448.4	10.3	a	392.2	280.1	20.0	170.0	47.0	a	1,890.8
1947	348.7	343.1	44.4	a	371.1	246.6	15.0	130.0	50.0	a	1,548.9
1948	377.3	441.4	131.3	a	345.2	292.0	25.0	150.0	40.0	a	1,802.2
1949	351.0	558.5	292.1	27.2	318.2	285.8	27.0	224.0	60.0	a	2,143.8
1950	473.7	577.1	362.4	49.9	354.1	287.2	35.0	411.0	75.0	a	2,625.4
1951	415.9	735.0	511.1	82.1	339.5	325.5	55.0	582.0	135.0	a	3,181.1
1952	420.3	846.0	551.5	88.4	320.4	313.2	80.0	800.0	200.0	a	3,619.8
1953	542.0	1,032.6	724.0	98.5	343.1	275.4	125.0	850.0	250.0	a	4,885.6
1954	523.0	889.4	732.4	92.6	361.2	302.7	175.0	950.0	382.9	a	4,409.2
1955	659.8	1,010.8	805.9	117.1	341.5	314.7	250.0	1,000.0	604.9	a	5,104.7
1956	694.3	1,343.4	828.0	107.4	349.1	325.0	325.0	1,080.0	750.0	a	5,802.2
1957	671.4	1,146.7	650.5	122.9	333.8	314.2	365.0	1,180.0	1,000.0	a	5,784.5
1958	610.4	1,163.8	938.8	145.1	341.5	322.2	500.0	1,074.0	1,538.2	a	6,634.0
1959	617.6	1,255.6	864.8	148.0	435.7	336.6	400.0	1,188.0	1,700.0w	a	6,946.3
1960	659.7	1,407.2	940.0w	150.0w	362.4	328.7	400.0	1,267.0	2,000.0w	a	7,515.0

U. S. Frozen Egg Packs—Millions of Lbs.

Year	Whole	Albumen	Yolk	Total
1946	231.7	94.6	65.9	392.2
1947	230.4	79.3	61.4	371.1
1948	185.1	89.6	70.5	345.2
1949	190.1	77.8	50.3	318.2
1950	200.3	92.7	61.1	354.1
1951	175.3	95.0	69.2	339.5
1952	148.7	102.9	68.8	320.4
1953	162.2	104.4	76.5	343.1
1954	162.3	110.1	88.8	361.2
1955	151.8	101.3	88.4	341.5
1956	156.9	108.6	83.6	349.1
1957	149.4	101.9	82.5	333.8
1958	150.4	104.1	87.0	341.5
1959	218.7	117.3	99.7	435.7
1960	a	a	a	362.4

U. S. Frozen Fish Packs—Millions of Lbs.

Year	All Fresh Water	Shrimp	All Shell Fish	Fillets	Halibut	Salmon	Whiting	All Salt Water	TOTAL EXCEPT CONV.x
1946	7.7	25.5	36.3	111.1	30.4	29.2	12.1	236.1	280.1
1947	6.3	28.3	39.4	89.4	26.0	16.5	16.7	200.9	246.6
1948	9.0	28.1	37.9	120.3	30.0	14.0	26.3	245.1	292.0
1949	7.4	32.5	44.6	101.2	30.7	18.0	36.7	233.8	285.8
1950	7.9	55.7	66.4	106.5	32.7	12.7	23.7	212.9	287.2
1951	7.4	58.6	69.8	117.9	26.0	13.5	48.9	248.2	325.5
1952	9.2	55.0	64.3	106.1	31.3	13.2	39.9	239.7	313.2
1953	7.5	56.7	72.4	67.4	26.8	14.2	34.5	195.6	275.4
1954	4.4	58.1	68.5	96.3	35.2	15.7	31.7	206.8	302.7
1955	4.6	50.0	62.8	79.7	26.6	10.3	35.6	207.1	314.7
1956	3.5	65.1	75.5	72.5	34.1	16.5	26.0	199.3	325.0
1957	3.1	74.0	89.1	56.1	28.1	10.1	35.7	170.0	314.2
1958	4.4	78.7	90.5	65.9	32.1	11.5	29.1	173.0	322.2
1959	3.3	98.4	109.5	a	a	a	a	169.4	336.6
1960	2.6	91.8	101.1	a	a	a	a	158.3	328.7

U. S. Frozen Convenience (Pre-cooked or Prepared) Food Packs—Millions of Lbs.

Year	BAKERY		FISH			MEATS		Nationality Foods	POULTRY		Soups	VEGETABLES		All Other Foods	TOTAL CONVENIENCE
	Pies	Other	Shellfish	Sticks	Other	Pies	Other		Pies	Other		Potato Preds.	All Other		
1946	d	12.0dw	----	---	a	d	6.0dw	e	d	d	----	5.0w	e	24.0e	47.0
1947	d	23.0dw	----	---	a	d	7.0dw	e	d	d	----	5.0w	e	15.0e	50.0
1948	d	25.0dw	----	---	a	d	5.0dw	e	d	d	----	5.0w	e	5.0e	40.0
1949	d	35.0dw	----	---	a	d	10.0dw	e	d	d	----	5.0w	e	10.0e	60.0
1950	d	40.0dw	1.0w	---	a	d	14.0dw	e	d	d	e	10.0w	e	10.0e	75.0
1951	d	30.0dw	5.0w	---	a	d	20.0dw	1.0w	d	d	e	35.0w	e	44.0e	135.0
1952	d	35.0dw	10.0w	---	a	d	40.0dw	5.0w	d	d	e	50.0w	e	60.0e	200.0
1953	d	40.0dw	15.0w	7.5	a	d	70.0dw	10.0w	d	d	e	70.7	e	36.8e	350.0
1954	27.2	19.2	31.0w	50.0	a	9.9	45.6	16.9	43.7	3.5	e	96.7	e	39.2e	382.9
1955	44.8	23.6	45.0w	65.4	a	21.7	69.7	28.9	83.2	8.1	e	160.2	e	54.3e	604.9
1956	60.0w	30.0w	60.0w	52.6	a	30.0w	70.0w	45.0w	100.0w	15.0w	e	189.7	e	97.7e	750.0
1957	80.0w	100.0w	77.0	53.1	e	35.0w	80.0w	50.0w	120.0w	20.0w	e	219.8	e	245.1e	1,000.0
1958	138.2	493.4	80.0w	60.9	21.8	50.5	84.5w	50.0w	152.8	30.0w	e	269.5	30.0w	30.8e	1,538.2
1959	150.0w	500.0w	80.0w	60.3	37.0	55.0w	90.0w	52.0w	160.0w	30.0w	e	371.0	32.0w	34.5e	1,700.0w
1960	160.0w	550.0w	80.0w	65.0	48.3	60.0w	95.0w	55.0w	165.0w	35.0w	e	551.4	35.0w	48.8e	2,000.0w

U. S. Frozen Food Market Data—Millions of Lbs.

Year	FRUITS			ORANGE CONCENTRATE			VEGETABLES			FISH			EGGS		
	May 1 Carry In	Pack	Shipments	Nov. 1 Carry In	Pack	Shipments	June 1 Carry In	Pack	Shipments	May 1 Carry In	Pack	Shipments	March 1 Carry In	Pack	Shipments
1946-47	269	523	497	---	9	9	145	453	367	75	280	285	118	392	436
1947-48	295	349	422	---	32	32	231	348	419	70	247	249	74	371	324
1948-49	222	377	418	---	128	103	180	446	419	68	292	285	121	345	407
1949-50	181	351	381	25	256	201	187	564	530	75	286	283	59	318	304
1950-51	151	474	417	80	351	303	221	587	538	78	287	276	73	354	395
1951-52	208	416	432	128	480	466	270	770	738	89	326	302	32	339	310
1952-53	192	420	462	142	514	545	302	896	837	113	320	324	61	320	339
1953-54	150	542	482	111	670	608	361	1,103	1,030	109	275	275	42	343	344
1954-55	210	523	511	173	689	682	445	975	1,024	110	303	290	41	361	339
1955-56	222	660	626	180	745	696	396	1,140	1,121	123	315	315	63	342	363
1956-57	256	694	658	229	756	759	415	1,533	1,323	123	325	330	42	349	325
1957-58	292	671	666	226	589	677	625	1,367	1,457	118	314	331	66	334	340
1958-59	297	610	601	140	836	726	535	1,433	1,375	101	322	276	60	342	356
1959-60	306	618	652	250	811	864	593	1,256	1,304	143	337	346	46	436	401
1960-61	272	660	632	197	870w	857w	545	1,407	1,203	134	329	313	81	362	394
1961-62	300	---	---	a	---	---	749	---	---	150	---	---	49	---	---

a--Not available. d--Products combined as indicated. W--Partially estimated. p--Preliminary. e--Products combined as indicated.
x--Includes fish frozen for bait, and for animal food.

U. S. Glassed Food Packs — Millions of Cases (principally 24/lb. or 24/pt.)

U. S. Pack

Year	Baby Food	Maraschino Cherry	CONDIMENTS: Horseradish	Mustard	Meat Sauce	Spices	Extracts	Fruits	Honey	Juice	Meat Poultry	Olives, Green	Peanut Butter	PRESERVES: Jams	Jelly	Butter	Marmalade*	Coffee, Soluble
1941	0.5	1.0	0.4	4.5	1.2	0.4	a	1.8	6.0	4.9	2.0	2.3	5.2	5.0	3.5	1.3	1.5	---
1942	1.5	0.9	0.4	4.0	1.2	0.4	a	8.0	6.0	6.8	2.0	2.4	5.8	7.5	4.5	1.5	2.5	---
1943	3.7	0.5	0.5	5.0	1.2	0.5	a	9.0	7.5	8.6	3.0	3.6	7.3	16.8	11.9	3.3	5.5	---
1944	6.8	0.8	0.6	4.0	3.2	0.6	a	9.5	7.5	9.0	5.0	3.8	9.1	19.1	12.5	5.2	5.2	---
1945	10.2	1.2	0.6	4.0	3.5	0.6	a	5.0	10.0	8.2	3.0	3.5	7.9	11.0	8.0	3.0	3.0	---
1946	12.9	1.7	0.6	5.0	3.0	0.8	1.5	4.5	9.0	11.8	4.1	3.6	9.5	12.5	10.0	4.2	2.9	---
1947	13.7	1.7	0.6	5.4	1.4	0.8	1.5	4.2	9.0	11.2	4.0	3.0	6.9	13.7	12.9	4.4	2.8	---
1948	18.0	1.6	0.5	5.0	1.5	0.7	1.6	3.0	8.0	10.0	3.5	2.9	6.7	11.5	9.8	2.4	1.1	---
1949	16.4	2.8	0.4	2.8	1.2	0.6	1.4	3.5	9.0	11.0	2.0	3.8	6.7	11.4	9.9	2.2	1.1	---
1950	19.4	1.2	0.5	6.4	1.5	0.7	1.6	3.0	10.0	13.0	4.0	3.3	6.8	11.8	12.1	3.0	1.1	---
1951	18.1	1.6	a	5.0	1.4	0.7	1.7	3.5	10.0	11.0	a	4.2	7.3	12.6	12.4	2.9	1.2	0.1w
1952	20.5	1.7	a	a	a	a	a	2.5	11.3	13.0	a	3.9	7.5	12.9	12.8	3.3	1.2	0.5w
1953	24.6	1.9	a	a	a	a	a	8.0	9.4	14.0	a	5.3	8.0	14.7	13.3	3.0	1.2	1.5w
1954	27.1	2.8	a	6.7	2.7	a	2.4	8.4	9.0	21.2	a	4.0	8.3	10.4	13.8	2.0	5.7	3.3
1955	26.0w	2.3	a	7.0w	3.0w	a	2.5w	8.4w	10.5	16.0	a	5.2	8.4	10.0	14.0	2.0	6.0	4.0w
1956	26.5w	1.3	a	7.0w	3.0w	0.8w	2.5w	8.5w	8.9	17.7	a	4.4	9.3	10.0w	14.0w	2.0w	6.0w	5.0w
1957	27.5w	2.3	a	7.5w	3.3w	0.8w	2.1w	8.0w	10.2	16.1	a	5.1	9.2	15.0w	14.0w	2.0w	5.0w	6.0w
1958	38.1	1.9	a	7.2	5.3	1.3	1.9	8.5w	11.1	18.9	a	6.0	10.2	15.3	13.8	2.0	4.0	6.4
1959	39.0w	2.1w	a	7.2w	5.0w	1.3w	2.1w	7.9w	10.3	19.7	2.5w	6.5w	10.3	15.0w	14.0w	2.0w	4.0w	8.0w
1960	40.0w	1.6w	a	7.5w	5.5w	1.4w	2.0w	8.5w	10.8	21.0w	2.5w	6.0w	10.5	15.0w	14.0w	2.0w	4.0w	9.0w
U.S. Pack by Regions-Millions of Cases-1959																		
East	a	a	a	a	a	a	a	a	0.7	a	a	a	a	a	a	a	a	a
South	a	a	a	a	a	a	a	a	2.4	a	a	a	a	a	a	a	a	a
Midw.	a	a	a	a	a	a	a	a	5.0	a	a	a	a	a	a	a	a	a
West	a	a	a	a	a	a	a	a	2.2	a	a	a	a	a	a	a	a	a
TOTAL	39.0	2.1	a	7.2	5.0	1.3	2.1	7.9	10.3	19.7	2.5	6.5	10.3	15.0	14.0	2.0	4.0	8.0
U.S. Pack by Regions-Millions of Cases-1960																		
East	a	a	a	a	a	a	a	a	0.8	a	a	a	a	a	a	a	a	a
South	a	a	a	a	a	a	a	a	2.9	a	a	a	a	a	a	a	a	a
Midw.	a	a	a	a	a	a	a	a	4.5	a	a	a	a	a	a	a	a	a
West	a	a	a	a	a	a	a	a	2.6	a	a	a	a	a	a	a	a	a
TOTAL	40.0	1.6	a	7.5	5.5	1.4	2.0	8.5	10.8	21.0	2.5	6.0	10.5	15.0	14.0	2.0	4.0	8.0

Year	PICKLES: Cuke	Other	SALAD DRESSING: Narrow Neck	Wide Mouth	Syrup	TOMATO PRODUCTS: Catsup	Chili Sauce	Juice	Other	Vegetable Oils	VEGETABLES: Seasonal	Non-seasonal	Vinegar	MISCELLANEOUS: Narrow Neck	Wide Mouth	GRAND TOTAL: Narrow Neck	Wide Mouth	Total
1941	13.7	a	1.0	15.8	1.8	10.9	2.6	0.9	0.7	2.0	3.0	2.1	5.0	---	13.0	31.0	83.0	114.0
1942	13.8	a	1.2	16.5	2.7	9.1	2.4	0.8	0.8	5.0	4.0	4.4	5.0	---	28.9	35.0	115.0	150.0
1943	11.4	a	1.0	16.0	9.3	6.8	4.0	0.4	0.7	5.8	5.8	8.3	4.0	1.2	25.4	43.0	145.0	188.0
1944	14.1	a	1.0	18.6	8.2	8.8	4.0	0.4	1.0	5.4	4.0	11.5	7.0	1.0	29.1	45.0	167.0	212.0
1945	14.7	a	1.1	16.1	13.0	10.0	2.4	0.5	0.7	5.9	4.9	14.8	1.4	6.3	48.5	53.0	170.0	223.0
1946	19.3	9.0w	1.2	18.1	12.5	14.0	3.6	0.7	0.2	5.2	2.7	14.6	5.6	3.7	27.0	63.0	172.0	235.0
1947	18.8	8.3	1.4	25.0	14.3	18.6	3.4	0.5	0.2	5.2	1.6	5.8	4.0	2.4	4.9	64.1	147.5	211.6
1948	19.6	8.4	1.7	27.1	7.2	15.1	2.4	0.5	0.2w	5.9	2.0	6.0	2.3	10.5	---	59.1	137.6	196.7
1949	19.3	4.0	1.8	27.9	7.2	9.5	1.2	0.9	0.2w	7.0w	2.7	5.0	6.5	5.1	1.0	53.0	132.5	185.5
1950	14.6	8.5	2.1	29.4	7.0	13.0	1.6	0.6	0.2w	6.0w	2.0	6.0	5.0	14.8	25.3	66.4	169.9	236.3
1951	26.8	8.0w	2.6	29.8	7.5	19.9	2.8	1.1	0.2w	7.0w	2.0	3.0	6.0	8.0	7.1	69.2	161.0	230.2
1952	32.2	8.5w	2.8	31.4	a	17.3	2.6	1.1	0.2w	a	2.5	3.0	5.5	29.0	17.0	71.5	173.5	245.0
1953	31.7	8.5w	3.1	32.1	a	16.9	2.2	1.0	0.1	a	2.5	3.0	5.5	32.9	24.9	75.7	190.0	265.7
1954	33.9	8.6	3.0	32.6	a	16.4	1.8	0.7	0.2w	a	3.0	5.8	a	28.1	13.9	76.5	198.9	275.4
1955	34.7	8.8w	3.5	33.7	a	19.3	2.1	0.7	0.2w	a	3.1	6.0	a	38.7	31.1	86.0	221.2	307.2
1956	36.0	8.8w	3.8	34.7	a	25.3	2.6	1.2	0.3w	a	3.5	5.5	a	33.2	33.2	89.6	225.4	315.0
1957	41.1	6.0w	4.2	36.3	a	21.2	1.6	1.2	0.3w	a	3.3	5.7	a	42.6	30.6	90.7	237.7	328.4
1958	37.2	5.6	4.4	37.6	14.4	24.9	1.5	e	0.3w	a	3.5	5.7w	10.4	11.3	39.4	91.5	256.6	348.1
1959	35.3	4.7	5.3	39.5	14.6w	22.7	2.3	e	0.3w	8.8w	4.2w	6.0w	10.0w	9.2	43.2	97.4	265.6	363.0
1960	35.5	5.0w	6.0	39.5w	14.5w	29.7	1.9	e	0.3w	8.8w	4.0w	6.0w	10.0w	6.1	44.4	105.8	266.2	372.0
U.S. Pack by Regions-Millions of Cases-1959																		
East	2.7	a	a	a	a	a	a	e	a	a	a	a	a	35.6	69.9	35.6	73.3	108.9
South	9.8	a	a	a	a	a	a	e	a	a	a	a	a	15.9	32.1	15.9	44.3	60.2
Midw.	17.4	a	a	a	a	a	a	e	a	a	a	a	a	26.6	74.6	26.6	97.0	123.6
West	5.4	a	a	a	a	8.9	1.0	e	a	a	a	a	a	10.4	42.4	19.3	51.0	70.3
TOTAL	35.3	4.7	5.3	39.5	14.6	29.7	1.9	e	0.3	8.8	4.2	6.0	10.0	9.2	43.2	97.4	265.6	363.0
U.S. Pack by Regions-Millions of Cases-1960																		
East	2.2	a	a	a	a	a	a	e	a	a	a	a	a	37.9	68.9	37.9	71.9	109.8
South	10.0	a	a	a	a	a	a	e	a	a	a	a	a	16.9	33.9	16.9	46.8	63.7
Midw.	17.8	a	a	a	a	a	a	e	a	a	a	a	a	28.7	74.8	28.7	97.1	125.8
West	5.5	a	a	a	a	10.8	0.9	e	a	a	a	a	a	11.5	41.4	22.3	50.4	72.7
TOTAL	35.5	5.0	6.0	39.5	14.5	29.7	1.9	e	0.3	8.8	4.0	6.0	10.0	6.1	44.4	105.8	266.2	372.0

a—Data not available. d—Preserve packs included in Misc. Widemouth. w—Partially or wholly estimated. *Marmalade includes unclassified preserves. e—Tomato juice included with other juices. x—California pack only.

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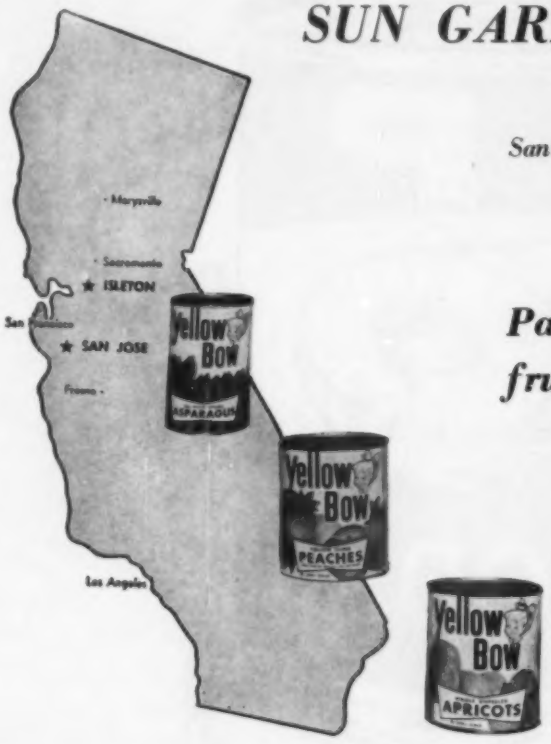
HEAD OFFICE: RICHMOND, CALIFORNIA

SUN GARDEN PACKING CO.



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Italian Tomatoes
Tomato Paste
Tomato Puree
Tomato Catsup
Pizza Sauce
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U. S. and World Dried Fruit and Nut Packs and U. S. Foreign Trade (Thousands of Short Tons)

U. S. Pack by Years

Year	DRIED FRUITS										NUTS (Unshelled Basis)						
	Apples	Apricots	Dates	Figs	Peaches	Pears	Prunes	Raisins	Currants	TOTALS	Almonds	Brazils	Cashews	Filberts	Pecans	Walnuts	Total Nuts
1946	18.3	18.0	16.7	36.6	25.0	4.6	222.2	189.3	3.7	534.4	37.8	---	---	8.5	38.3	71.9	156.5
1947	15.0	15.2	10.2	38.0	17.1	2.6	200.2	301.3	4.5	604.1	29.2	---	---	8.8	59.3	64.6	161.9
1948	7.7	12.4	16.2	30.3	8.1	1.0	177.4	227.7	4.4	485.2	34.0	---	---	6.4	58.8	71.1	200.3
1949	14.5	14.2	14.1	27.8	14.3	2.2	161.2	255.6	3.6	507.5	43.3	---	---	11.1	64.1	88.1	206.6
1950	16.5	14.2	15.1	24.2	7.3	1.9	149.6	151.3	3.5	383.6	37.7	---	---	6.7	62.8	64.3	171.5
1951	10.0	7.4	18.8	29.3	9.3	1.5	180.2	238.9	3.3	498.7	42.7	---	---	6.9	77.4	77.7	204.7
1952	10.0	8.2	16.5	28.3	7.5	1.5	137.2	284.5	3.2	496.9	36.4	---	---	12.3	74.0	83.8	206.5
1953	8.5	16.0	17.0	24.4	8.6	1.1	150.9	228.6	3.6	458.9	38.6	---	---	4.9	105.8	59.2	208.5
1954	11.2	6.6	15.4	25.6	9.8	3.0	177.5	165.3	2.9	417.3	43.2	---	---	8.6	45.3	75.4	172.5
1955	11.9	14.3	25.3	25.4	7.0	2.3	135.3	222.5	3.1	447.1	38.3	---	---	7.7	73.4	77.4	196.8
1956	10.0	9.1	19.2	24.8	7.4	1.7	196.2	197.1	3.1	468.6	58.6	---	---	3.0	86.9	71.8	220.3
1957	13.7	7.7	23.3	22.7	7.8	1.9	167.9	162.7	3.6	411.3	37.5	---	---	12.5	70.7	66.8	187.3
1958	13.4	3.0	19.6	23.2	4.7	1.1	96.8	186.0	3.0	377.2	19.8	---	---	7.5	85.7	88.7	201.7
1959	13.0	8.4	26.0	19.1	8.0	1.8	144.0	223.0	3.5	446.8	82.8	---	---	10.1	71.8	61.9	226.6
1960	8.4	9.8	21.1	16.8	5.1	1.6	139.0	194.0	3.3	399.1	53.0	---	---	9.0	92.9	72.8	227.7
U.S. Pack by Regions--1959																	
N.W.	5.0	---	---	---	---	---	5.7	---	---	10.7	---	---	---	10.1	---	3.8	13.9
Calif.	5.9	8.4	26.0	19.1	8.0	1.8	138.3	216.8	3.5	427.8	82.8	---	---	---	---	58.1	140.9
Other	2.1	---	---	---	---	---	---	6.2	---	8.3	---	---	---	---	71.8	---	71.8
U.S.	13.0	8.4	26.0	19.1	8.0	1.8	144.0	223.0	3.5	446.8	82.8	---	---	10.1	71.8	61.9	226.6
U.S. Pack by Regions--1960																	
N.W.	4.0	---	---	---	---	---	---	---	---	4.0	---	---	---	9.0	---	2.5	11.5
Calif.	4.4	9.8	21.1	16.8	5.1	1.6	139.0	190.4	3.3	391.5	53.0	---	---	---	---	70.3	123.3
Other	---	---	---	---	---	---	---	3.6	---	3.6	---	---	---	---	92.9	---	92.9
U.S.	8.4	9.8	21.1	16.8	5.1	1.6	139.0	194.0	3.3	399.1	53.0	---	---	9.0	92.9	72.8	227.7
Known World Packs (Date Figures are U. S. Pack Plus Exports of All Other Nations)																	
1946	22.9	31.0	304.0	204.2	31.5	7.9	253.5	396.0	82.8	1,333.8	168.2	27.6	75.6	164.5	38.4t	111.0	585.3
1947	20.2	26.8	358.2	239.9	22.8	5.5	236.7	459.8	102.8	1,472.4	170.1	30.5	26.9	112.2	59.3	122.5	521.5
1948	10.8	20.7	342.8	200.5	13.8	2.7	216.8	474.0	102.6	1,384.7	134.7	19.0	51.0	102.3	88.8	121.0	516.8
1949	17.3	24.6	236.7	196.9	20.1	3.1	212.5	463.8	122.9	1,297.9	155.5	36.4	38.9	159.3	64.1	153.9	607.1
1950	18.4	26.5	313.8	182.4	12.8	3.0	187.9	390.4	107.4	1,242.6	217.1	23.4	56.0	90.2	62.8	119.9	569.4
1951	12.2	32.5	449.9	175.0	12.5	2.3	225.7	458.1	109.5	1,461.8	196.0	34.3	67.2	143.5	77.4	128.9	614.6
1952	11.1	19.3	356.3	159.5	10.0	2.2	157.4	534.8	102.3	1,400.6	233.0	18.9	63.3	100.1	74.0	146.0x	600.0
1953	11.4	26.5	354.6	189.3	14.0	2.1	226.4	536.7	108.5	1,469.5	227.0	33.2	59.4	115.9	105.8	105.9	647.2
1954	13.5	19.8	337.4	200.0	13.4	3.9	207.2	454.0	104.9	1,354.1	205.0	34.0w	65.0	174.9	a	126.0	505.9
1955	13.8	24.2	382.1	166.9	12.4	3.2	187.1	490.9	98.9	1,379.5	139.0	30.5w	77.0	126.7	a	149.3	415.0
1956	14.4	24.0	385.2	207.3	13.7	2.8	222.0	507.1	120.1	1,496.6	147.9	45.5	66.0	197.0	a	136.5	592.9
1957	14.7	25.2	339.7	187.9	10.6	2.8	211.3	463.7	110.9	1,366.8	265.1	42.0	77.0	155.5	a	99.7	639.3
1958	14.9	21.7	351.5	174.4	9.9	2.0	144.3	486.9	111.4	1,317.0	146.2	43.5	73.0	169.0	a	175.0	606.7
1959	14.0w	27.0w	406.7	159.1	13.0w	2.7w	224.2	576.0	105.9	1,528.6	358.5	24.0	62.0	174.1	a	129.0	747.6
1960	12.0w	25.0w	370.0w	172.1	10.0w	2.5w	163.3	444.8	117.2	1,316.9	195.7	35.0	77.0	134.6	a	157.3	599.6
1961p	a	a	a	a	a	a	a	a	a	a	350.0w	45.0	74.0	170.0w	a	150.0w	789.0
U.S. Exports (Years Starting July 1 of Year Shown)--Nuts Shown Shelled Basis																	
1946	4.6	3.4	2.1	2.1	12.7	0.6	68.9	30.4	10.3f	135.1	0.6	---	---	0.2	0.3	1.2	2.3
1947	1.9	2.4	1.0	0.7	1.4	0.4	106.5	131.0	0.1f	245.4	0.4	---	---	0.5	0.2	1.1	2.2
1948	0.5	3.4	0.6	7.6	2.6	0.4	96.4	66.4	0.2f	178.1	0.1	---	---	0.2	0.6	0.6	1.5
1949	1.4	2.1	0.5	0.9	0.8	0.9	76.2	85.8	0.2f	169.8	0.2	---	---	0.2	0.5	0.9	1.8
1950	1.1	2.2	0.5	0.5	1.7	0.6	30.8	38.5	0.4f	76.3	0.1	---	---	0.3	0.3	2.8	3.5
1951	3.5	1.4	a	a	0.4	0.4	46.8	79.8	1.2f	133.5	0.5	---	---	0.4	0.4	0.6	1.9
1952	1.4	0.9	0.8	0.5	0.6	0.6	36.3	106.2	a	147.3	0.2	---	---	0.5	0.3	1.5	2.5
1953	0.7	2.8	0.6	0.6	0.4	0.6	42.3	59.4	3.2f	110.6	3.4	---	---	0.1	0.6	0.8	4.9
1954	1.3	1.7	0.9	0.7	0.8	0.5	38.3	41.9	2.5f	88.6	4.3	---	---	0.5	0.5	2.5	7.8
1955	3.5	1.8	0.7	0.7	0.7	0.8	36.8	76.1	3.8f	124.9	2.6	---	---	0.5	0.4	1.7	5.2
1956	1.0	2.1	1.0	0.7	0.8	0.8	56.0	60.9	3.4f	126.7	6.9	---	---	0.2	0.5	0.7	8.3
1957	8.7	2.4	1.2	0.7	1.7	1.1	61.1	30.7	4.2f	111.8	4.5	---	---	0.4	0.6	0.9	6.4
1958	2.5	0.4	2.2	0.8	0.5	0.4	27.1	23.2	2.6	59.7	1.0	---	---	0.5	0.6	2.3	4.4
1959	3.6	0.8	3.5	0.7	0.5	0.4	30.9	30.2d	d	70.6	4.2	---	---	0.5	0.5	0.5	5.7
1960p	1.9	1.4	4.7	0.8	0.8	0.3	40.9	56.5d	d	107.3	9.9	---	---	0.4	0.5	0.1	10.9
U.S. Imports (Years Starting July 1 of Year Shown)--Nuts shown Shelled Basis																	
1946	---	---	22.6	1.7	---	---	---	1.1	---	25.4	4.5	9.4	15.2	6.0	0.2	0.4	35.7
1947	---	---	8.9	1.5	---	---	---	---	---	11.4	5.9	9.8	14.2	2.1	0.2	0.3	32.5
1948	---	---	17.3	1.4	---	---	---	---	---	18.7	5.2	9.3	19.1	3.9	---	1.3	38.8
1949	0.1	---	14.9	2.4	---	---	---	0.1	---	17.5	0.7	9.7	19.7	3.3	0.2	3.2	36.8
1950	0.3	---	25.0	4.9	---	---	---	0.2	0.4	30.8	6.3	5.7	27.4	2.5	0.3	3.2	45.4
1951	---	---	20.8	4.8	---	---	---	---	0.1	25.7	1.8	8.5	26.8	3.5	---	3.4	37.8
1952	---	0.2	19.0	3.0	---	---	---	0.1	0.1	22.4	3.4	2.8	22.5	2.6	0.1	3.4	34.8
1953	---	---	20.2	6.6	---	---	---	0.1	---	26.9	2.3	8.5	24.2	2.8	0.1	3.8	41.7
1954	---	---	22.1	6.4	---	---	---	---	---	28.5	2.2	6.0	33.4	3.5	0.2	4.0	43.9
1955	---	---	20.5	8.5	---	---	---	---	0.1	29.1	0.2	10.3	---	---	---	---	10.5
1956	---	---	22.1	8.0	---	---	---	---	---	30.1	1.0	9.2	24.6	2.9	0.1	2.1	39.9
1957	---	---	21.3	5.7	---	---	---	---	---	27.0	2.4	9.8	24.8	2.6	0.2	1.7	51.5
1958	---	---	17.9	11.1	---	---	---	0.5	1.6	31.1	6.1	9.7	31.2	3.6	0.2	1.7	52.5
1959	0.1	---	18.2	10.0	---	---	---	0.6	1.3	30.2	3.4	3.9	31.6	3.8	0.3	1.7	44.7
1960p	---	---	18.3	11.8	---	---	0.8	0.2	---	31.1	0.3	4.4	32.1	3.4	0.3	2.9	43.4

a—Not available. f—Fruit salad exports. p—Preliminary figures, 11 months only. t—U. S. pecan pack included in totals. w—Partially or wholly estimated. x—Excludes Bulgaria, Hungary, Rumania.

U. S. Packs of Dry Food Products —Thousands of Short Tons of 2,000 lbs.

Year	BEVERAGES, IMPORTS			MFD. CEREALS			CHIPS		CORN PRODUCT (SALES)		EGGS	FRUIT PRODUCTS		
	Cocoa	Coffee	Tea	Breakfast Foods	Prepared Flour Mixes	Other	Corn	Potato	Dry Sweeteners	Starch		Candied Fruit & Peel	Dried Fruits	Fruit Powders, Granules
1941	346	1,127	a	a	a	a	a	a	329	765	23	a	489	a
1942	120	857	a	a	a	a	a	a	385	773	118	a	536	a
1943	287	1,100	45	a	a	a	a	a	361	765	131	a	700	a
1944	341	1,303	45	a	a	a	a	a	342	820	160	a	596	a
1945	310	1,358	42	a	a	a	a	a	333	618	53	a	567	a
1946	297	1,365	47	a	a	a	a	a	324	841	63	a	534	a
1947	299	1,248	34	743	635	a	9	78	393	755	43	a	604	a
1948	273	1,386	46	a	a	a	a	90w	356	694	22	a	485	a
1949	314	1,459	47	a	a	a	a	100w	389	750	38	a	508	a
1950	330	1,219	57	a	a	a	a	110w	414	895	47	a	384	a
1951	303	1,344	a	a	a	a	a	120w	384	830	9	a	499	a
1952	286	1,340	a	a	a	a	a	130w	374	840	9	a	497	a
1953	283	1,393	a	a	a	a	a	140w	392	916	10	a	459	a
1954	258	1,131	a	789	888	a	19	149	373	953	11	a	417	a
1955	250	1,299	52	a	a	a	a	165w	366	1,023	12	a	447	a
1956	279	1,406	50	a	a	a	a	182	379	1,031	11	a	469	a
1957	255	1,381	51	a	a	a	a	217	372	1,022	14	a	411	a
1958	221	1,334	52	830	949	a	31	212	417	1,032	13	a	377	a
1959	242	1,538	55	845w	1,052	a	33	250	434	1,097	27	a	447	a
1960	275	1,460	58	855	968	a	35	275	411p	1,100p	23	a	399	a

Year	LEAVENINGS		MACARONI PRODUCTS			MILK PRODUCTS					NUTS			SPICES	
	Baking Powder	Dry Yeast	Macaroni, Spaghetti	Noodles	Other	Whole	Nonfat	Buttermilk	Malted	Ice Cream Mix	Tree Nuts Crop	Peanuts Crop	U.S. Imports (c)	U.S. Crop: Mustard	U.S. Imports: All
1941	a	a	a	a	a	23	183	38	12	a	143	738	103	37	81
1942	a	a	a	a	a	31	283	35	17	a	128	1,096	32	22	29
1943	a	a	a	a	a	69	255	30	25	a	155	1,088	39	17	16
1944	a	a	a	a	a	89	291	28	20	a	174	1,040	91	15	19
1945	a	a	a	a	a	109	321	25	21	a	174	1,021	120	13	30
1946	a	a	a	a	a	94	327	19	23	a	157	1,019	126	18	42
1947	55	158	346	63	a	82	339	23	19	a	162	1,091	123	10	47
1948	a	a	a	a	a	85	341	21	16	a	200	1,168	147	10	47
1949	a	a	a	a	a	83	467	25	13	a	207	934	143	6	46
1950	a	a	a	a	a	62	441	24	15	a	172	1,018	186	9	58
1951	a	a	a	a	a	66	351	25	17	a	205	839	146	10	a
1952	a	a	a	a	a	51	432	26	15	a	207	676	156	8	a
1953	a	a	a	a	a	52	607	29	16	a	209	787	163	4	a
1954	79	160	367	71	a	47	701	28	16	a	173	504	196	5	a
1955	a	a	a	a	a	55	702	29	17	2	197	788	200	16	a
1956	a	a	a	a	a	58	774	32	16	2	220	783	155	18	78
1957	a	a	a	a	a	55	839	35	17	2	187	718	115	6	53
1958	30	151	386	71	a	44	855	39	16	2	202	932	53	10	53
1959	30w	150w	400w	70w	a	45	862	41	13	2	227	795	45	8	45
1960	30w	150w	400w	70w	a	49	909	43	12	1	228	886	43	10w	43

Year	SUGAR DELIVERIES*				VEGETABLES						MISCELLANEOUS PRODUCTS				GRAND TOTAL
	Cane Refineries	Beet Factories	Importers	Mainland Cane Mills	Beans	Peas	Potato	Soup Mixes	Dehy. Vegs.	All Other	Puddings, dry	Flavor paste, powder	Pectin	Pet Foods	
1941	5,191	1,825	527	90	855	173	1	a	6	a	a	a	a	a	a
1942	3,219	1,592	436	70	878	338	10	a	17	a	a	a	a	a	a
1943	4,346	1,426	462	116	972	501	36	a	27	a	a	a	a	a	a
1944	5,249	1,081	489	154	732	401	66	a	38	a	a	a	a	a	a
1945	4,392	975	429	92	588	268	38	a	27	a	a	a	a	a	a
1946	3,749	1,289	449	139	735	304	10	a	17	a	a	a	a	a	a
1947	5,091	1,472	498	108	791	290	18	a	7	a	146	14	5	340	16,200w
1948	4,815	1,548	478	91	969	265	83	a	7	a	a	a	a	a	a
1949	5,127	1,390	481	126	993	146	25	a	9	a	a	a	a	a	a
1950	5,541	1,634	518	98	756	154	20	a	10	a	a	a	a	a	a
1951	5,110	1,618	459	110	791	177	10	a	12	a	a	a	a	a	a
1952	5,480	1,457	545	114	746	123	5	a	13	a	a	a	a	a	a
1953	5,659	1,637	542	117	825	153	5	a	16	a	a	a	a	a	a
1954	5,370	1,687	529	111	847	155	5	a	18	a	191	32	4	474	17,000w
1955	5,655	1,686	527	36	832	126	10	a	17	a	a	a	a	a	17,900w
1956	5,955	1,852	555	88	856	233	23	a	20	a	a	a	a	a	18,900w
1957	5,682	1,932	533	55	781	166	27	a	19	a	a	a	a	a	18,500w
1958	5,786	2,082	546	48	949	124	43	a	21	a	205	33	5	779	19,000w
1959	6,317	2,243	568	44	943	230	60	a	30	a	210w	35w	5w	790w	20,400w
1960	6,512	2,165	600	46	895	154	60	a	34	a	210w	30w	5w	790w	20,300w

*U.S. deliveries by primary distributors, calendar years, refined equivalent. a—Not available. c—Nut imports on basis of years starting July 1 of year shown. p—Preliminary. w—Estimated.

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Year	—NORTHWEST— Royal Anns	Other	Total	—CALIFORNIA— Royal Anns	Other	Total	MONTANA	UTAH	ILLINOIS	MICHIGAN	NEW YORK	OHIO	PENNA.	WISCONSIN	OTHER	TOTAL U.S.
1946	98.3	59.3	157.6	46.8	13.1	59.9	...	...	...	19.6	3.0	...	0.9	3.9	...	244.9
1947	39.3	63.0	102.3	51.6	20.9	72.5	...	...	...	22.4	5.8	2.8	0.6	1.6	...	208.0
1948	44.7	54.7	99.4	56.1	37.1	93.2	...	0.6	...	23.8	16.5	...	...	11.4	...	244.9
1949	107.1	52.4	159.5	69.8	51.1	120.9	...	2.6	4.2	37.0	14.8	2.5	2.8	2.2	...	346.5
1950	86.8	31.8	118.6	41.4	20.4	61.8	...	2.5	...	39.2	26.0	6.4	4.0	3.2	...	261.7
1951	45.1	26.1	71.2	39.3	15.3	54.6	...	0.8	...	36.0	40.0	...	6.7	3.2	...	212.5
1952	51.5	19.3	70.8	55.1	42.3	97.4	...	...	...	35.6	18.8	...	3.2	3.1	...	228.9
1953	90.7	46.4	137.1	40.5	17.8	58.3	...	...	...	47.2	16.8	2.0	0.3	4.3	...	266.0
1954	144.2	41.2	185.4	33.4	31.3	64.7	...	0.3	...	50.0	45.2	...	3.2	7.7	...	356.5
1955	111.2	41.8	153.0	46.7	32.2	78.9	...	3.5	...	34.4	45.0	...	3.1	5.2	...	322.1
1956	52.1	18.1	70.2	67.1	26.7	93.8	...	1.7	...	40.8	5.8	...	1.0	1.7	...	214.5
1957	54.8	21.1	75.9	a	a	110.7	0.8	7.9	...	89.2	30.6	...	2.9	0.9	...	318.8
1958	93.6	60.5	153.1	15.1	16.3	31.4	0.9	18.3	...	66.8	47.1	...	3.3	...	...	321.0
1959	83.6	53.6	137.2	24.1	17.2	41.3	0.1	4.3	...	78.8	50.2	...	1.7	...	...	313.6
1960	40.9	29.4	70.3	37.7	52.2	89.9	2.1	4.5	...	71.2	25.5	...	0.3	...	...	263.8

a--not available.

Sources of Statistical Data

RAW PRODUCTS: Acreage, crop, grower prices from U.S. Dept. of Agriculture and cooperating state agricultural departments. Utilization data largely from USDA, but some converted by Canner/Packer from pack figures.

CANNED FRUITS & VEGETABLES: Largely compiled from records of Natl. Canners Assn., Florida Canners Assn., Canners League of California, Utah Canners Assn., New York State Canners & Freezers Assn., Northwest Canners & Freezers Assn., Pineapple Growers Assn. of Hawaii, U.S. Dept. of Commerce, and reports of individual canners. Some non-seasonal canned vegetable packs are trade estimates.

CANNED & BOTTLED JUICES: Citrus from Natl. Canners Assn., Florida Canners Assn., U.S. Depts. of Agriculture and Commerce, Lemon Products Advisory Bd., reports of individual canners. Apple and tomato from Natl. Canners Assn. Pineapple from Pineapple Growers Assn. Grape developed from crop figures, prune from shipment data compiled by Prune Advisory Bd. Others are U.S. Census data for 1947 and 1954, trade estimates for other years.

OTHER CANNED FOODS: Ades and punches—trade estimates based on reported consumption. Baby foods—Natl. Canners Assn. through 1956; estimates thereafter. Coffee—converted from USDC can shipment figures. Fish—U.S. Fish & Wildlife Service. Meats—U.S. Dept. of Commerce and Natl. Canners Assn. through 1944; U.S. Dept. of Agriculture inspected tonnage, converted from lbs., thereafter. Pet foods—fish from U.S. Fish & Wildlife Service; other converted from USDC can shipment figures. Poultry—USDA inspected tonnage, converted from lbs. Shortening and lard—converted from USDC can shipment figures. Spaghetti—with meat, from USDA inspected tonnage figures; other from Census reports, plus trade estimates. All other: U.S. Census data for 1947 and 1954; trade estimates.

DRIED FRUITS & VEGETABLES: Northwest figures and California dates from U.S. Dept. of Agriculture. California packs from Dried Fruit Assn. of California. World dried fruit except dates from U.S. Dept. of Agriculture. World dates—exports of leading nations, as reported by Commonwealth Economic Committee, London, plus U.S. production from USDA. U.S. dried fruit exports-imports from U.S. Dept. of Commerce. Bean, pea packs from USDA. Peppers from Calif. Dept. of Agriculture. Dehydrated vegetables—U.S. Dept. of Commerce through 1945, estimates thereafter.

NUTS: Crop data from USDA. Exports-imports from USDC.

OTHER DRY FOODS: Cereal products from U.S. Census Bureau. Coffee-tea-cocoa imports from U.S. Dept. of Commerce. Eggs from U.S. Dept. of Agriculture. Milk from USDA. Pet foods from U.S. Census Bureau.

FROZEN FRUITS & VEGETABLES: From Natl. Assn. of Frozen Food Packers, Western Frozen Food Processors Assn., Northwest Canners & Freezers Assn., Michigan State University, New York State Canners & Freezers Assn., Utah Canners Assn., and from reports of individual processors.

FROZEN JUICES & CONCENTRATES: From Florida Canners Assn., U.S. Dept. of Agriculture, Lemon Prods. Advisory Bd., U.S. Dept. of Commerce, and from reports of individual packers.

OTHER FROZEN FOODS: Convenience or prepared foods—potato from Natl. Assn. of Frozen Food Packers; other from U.S. Dept. of Agriculture for 1955 and 1956, from reports of individual packers and from trade estimates in other years before and after. Eggs from USDA. Meats and poultry from trade estimates. Seafoods from U.S. Fish & Wildlife Service.

GLASSED FOODS: Total U.S. pack—U.S. Dept. of Commerce food glass container shipments, converted on basis two dozen per case. Baby foods—USDC for early years, Natl. Canners Assn. 1946-1956, trade estimates thereafter. Maraschino cherries—U.S. Census figures for 1947 and 1954; developed from brined cherry pack and import data in other years. Condiments—based partially on import figures, partially on trade estimates. Fruits—Census data plus trade estimates. Honey—converted from U.S. Dept. of Agriculture honey crop reports. Juices—USDC and Natl. Canners Assn. data, plus figures developed from crop data and trade estimates. Meat and poultry from trade estimates. Olives (green) from Calif. crop and U.S. imports, plus Census figures for 1947 and 1954. Peanut butter converted from USDA figures on peanuts utilized for manufacture. Pickles—cucumber from crop data by USDA; other from Census figures for 1947 and 1954, trade estimates in other years. Salad dressings from USDC. Catsup and other tomato products—largely from Natl. Canners Assn., plus Census data, Canners League of Calif., Utah Canners Assn., New York Canners & Freezers Assn. Vegetable oils—figures based on arbitrary proportion of total edible vegetable oil output reported by USDA and export-import data from USDC. Vegetables—USDC and Natl. Canners Assn., supplemented by trade sources; bean figures through 1945 from *The Glass Packer*. Vinegar—developed from USDA apple crop utilization data. Syrups—developed from Census data, USDA total syrup production figures, trade estimates. Preserves—through 1946 estimated from reports of USDC and War Food Administration; 1947 from U.S. Census Bureau; 1948-56 from USDC; trade estimates thereafter. Extracts—1947 and 1954 from Census Bureau, others trade estimates. Soluble Coffee—1947 and 1954 from Census Bureau, others trade estimates.

BRINED CHERRIES: Compiled by N.W. Cherry Briners Assn. from reports of Canners League of Calif., Michigan State University, New York State Canners & Freezers Assn., and from reports of individual packers.

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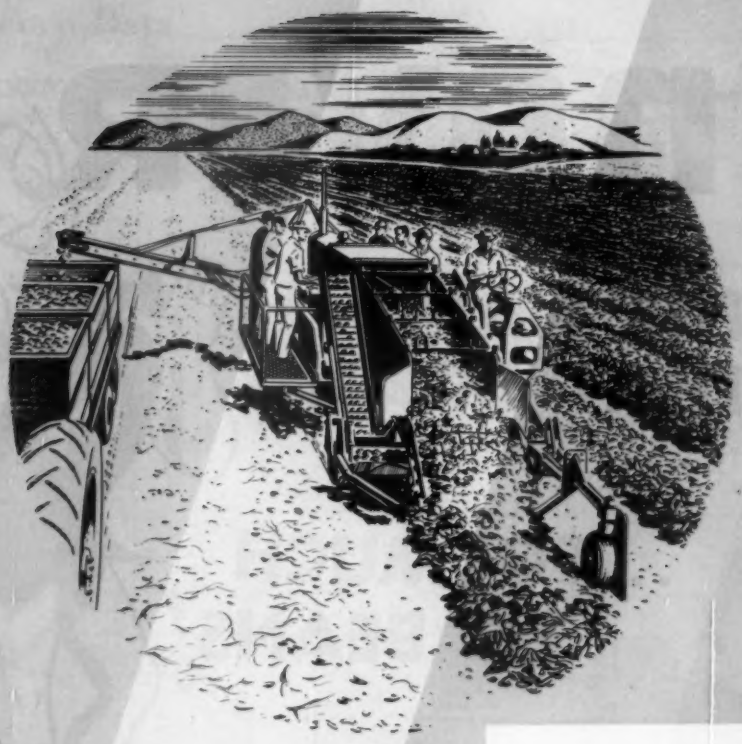

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HANOVER

THE NAME THAT MEANS ...SO MUCH TO BEANS!

HANOVER CANNING COMPANY
HANOVER, PENNSYLVANIA

NOW AVAILABLE AT SUPER MARKETS AND NEIGHBORHOOD GROCERS

RAW PRODUCTS: Processing Dates for Fruits and Berries in the United States

States and Territories	Apples	Apricots	BERRIES							Cherries	Grapes	Grapefruit	Lemons	Olives	Oranges	Peaches	Pears	Plums
			Black	Blue	Cran	Goose	Logan	Rasp	Straw									
Alabama									May 1 June 15							June 5 Aug. 1		
Arizona												Nov. 1 May 1						
Arkansas	Aug. 15 Dec. 31		June 1 July 15								Aug. 15 Oct. 1					July 10 Sept. 1		
California	Aug. 1 Mar. 15	June 5 Aug. 15					June 1 July 1	June 15 July 15	Mar. 1 Oct. 15	May 10 July 10	Aug. 15 Oct. 1	Jan. 1 July 1	All Year	Oct. 1 Mar. 15	June 1 Nov. 15	July 10 Sept. 20	July 15 Oct. 15	July 15 Sept. 30
Colorado	Oct. 15 Dec. 15	July 10 Aug. 1								June 15 July 15						Aug. 25 Sept. 25	Sept. 15 Oct. 20	
Delaware																Aug. 1 Sept. 30		
Florida									Jan. 15 June 15			Oct. 15 June 15			Oct. 15 June 20			
Georgia																June 15 Aug. 10		
Hawaii																		
Idaho	Sept. 15 Dec. 31									July 1 Aug. 10						Aug. 15 Sept. 15		
Kansas	Aug. 1 Nov. 30																	
Louisiana			June 1 July 31						May 1 June 15									
Maine				July 25 Sept. 15					June 5 June 25									
Maryland	Sept. 1 Dec. 10			June 10 Aug. 20				July 1 July 20										
Massachusetts					Sept. 1 Dec. 31													
Michigan	Aug. 1 Nov. 30		July 25 Aug. 10			July 20 Aug. 30		July 5 July 20	June 10 July 10	July 1 Aug. 15	Sept. 1 Oct. 30					Sept. 1 Oct. 15	Sept. 1 Nov. 30	Aug. 1 Aug. 30
Mississippi			June 1 July 31															
Missouri	Aug. 15 Dec. 1		June 20 Aug. 1								Aug. 25 Oct. 15					July 25 Sept. 1		
Montana										July 14 Aug. 15								
New Jersey				June 20 Aug. 20	Sept. 1 Dec. 31			July 14 Aug. 15								Aug. 1 Sept. 15	Sept. 20 Nov. 15	
New York	Sept. 15 Dec. 31	Aug. 1 Aug. 15						July 5 Aug. 1	June 10 June 25	June 25 Aug. 15	Sept. 10 Nov. 1					Aug. 20 Sept. 30	Sept. 10 Nov. 15	Aug. 15 Sept. 30
North Carolina																July 25 Aug. 30		
Ohio	Sept. 15 Dec. 31									July 5 Aug. 15	Sept. 1 Oct. 15							
Oklahoma	Aug. 15 Oct. 15		June 1 July 1															
Oregon	Sept. 15 Dec. 31	Aug. 15 Sept. 15	Aug. 1 Oct. 10			May 15 June 15	June 20 Aug. 1	June 25 Aug. 1	May 20 June 25	June 20 July 31						Aug. 15 Oct. 1	Aug. 10 Nov. 1	Aug. 15 Sept. 30
Pennsylvania	Sept. 1 Jan. 31							July 1 July 30		June 30 July 31	Sept. 20 Nov. 1					Aug. 15 Sept. 20		
Puerto Rico												Nov. 15 April 30						
South Carolina																July 15 Aug. 20		
Texas			June 10 July 31									Dec. 1 May 1				June 10 Aug. 1		
Utah	Oct. 15 Dec. 15	July 10 Aug. 1						July 1 July 20	June 15 July 15	June 15 July 15						Aug. 25 Sept. 25	Sept. 15 Oct. 20	
Virginia	Aug. 10 Dec. 31								May 15 June 5									
Washington	Sept. 15 Dec. 31	Aug. 25 Sept. 20	Aug. 15 Sept. 15	July 15 Aug. 15		May 15 June 15	June 25 Aug. 1	July 1 Aug. 1	June 1 July 1	June 25 July 31						Aug. 15 Sept. 20	Aug. 10 Nov. 1	Aug. 15 Sept. 30
West Virginia	Aug. 10 Jan. 31																	
Wisconsin				June 10 Aug. 30	Oct. 1 Nov. 20	June 25 Aug. 1			June 10 July 20	June 25 Aug. 20								
Ontario, Canada	Sept. 15 Dec. 31		Aug. 1 Sept. 1					July 10 Aug. 17	June 14 July 17	July 1 Aug. 10						Sept. 1 Oct. 5	Sept. 15 Dec. 15	Sept. 15 Oct. 7

—American Can Co., National Canners Assn., University of Tennessee, U.S. Department of Agriculture

Reference Data

RAW PRODUCTS: Processing Season for Vegetables in the United States

States and Territories	Asparagus	BEANS		Beets	Corn	Carrots	Okra	Peas	Fresh Pack Pickles	Pimientos	Pumpkin	Spinach	Squash	Sweet Potatoes	Tomatoes
		Lima	Snap												
Alabama			May 1 Sept. 15				May 15 Sept. 30		May 15 June 30	July 15 Nov. 5				Sept. 15 Feb. 1	July 10 Sept. 30
Arkansas		July 25 Oct. 25	May 15-July 31 Sept. 10-Oct. 31		July 1 July 20			May 15 May 25				Mar. 15-May 15 Nov. 10-Dec. 31			
California	April 10 June 30	Sept. 1 Oct. 31	July 1 Sept. 30	June 20 Dec. 10		May 1 July 30		April 10 June 30	July 1 Aug. 31		Oct. 1 Nov. 15	Mar. 10-May 10 Oct. 1 -Dec. 31	Nov. 15 Jan. 10	Sept. 15 Nov. 30	Aug. 1 Nov. 30
Colorado		Sept. 5 Sept. 30	July 15 Sept. 15	Oct. 15 Oct. 20	Aug. 20 Sept. 20			April 10 June 30	July 15 Oct. 5		Oct. 5 Nov. 15		Oct. 1 Nov. 15		Aug. 10 Oct. 25
Delaware	April 25 June 30	Aug. 5 Oct. 15	June 15 Sept. 30		July 20 Sept. 15			May 20 July 31	June 15 Aug. 15		Oct. 1 Nov. 15		Oct. 1 Nov. 5	Sept. 15 Nov. 10	Aug. 1 Sept. 25
Florida			Oct. 15-Dec. 15 Jan. 1 -May 15											Sept. 15 Feb. 1	Nov. 15 June 15
Georgia			May 10-June 30 July 10-Oct. 20				May 15 Sept. 1		May 5 June 30	July 15 Nov. 15				Oct. 1 Jan. 15	
Idaho	April 10 June 30	Aug. 15 Sept. 30	July 20 Sept. 10		Aug. 15 Sept. 25			June 1 Aug. 5							Aug. 20 Oct. 15
Illinois	April 20 July 10	Aug. 20 Sept. 30	July 15 Aug. 15	July 15 Nov. 30	Aug. 10 Oct. 1			June 5 July 25	June 20 Sept. 30		Sept. 15 Oct. 30				Aug. 1 Oct. 10
Indiana	April 20 July 5	Aug. 15 Oct. 15	July 10 Sept. 15	Sept. 15 Oct. 15	Aug. 1 Sept. 25			June 5 July 10	July 10 Sept. 20		Sept. 15 Nov. 15	May 15-June 15 Oct. 1 -Oct. 25			July 25 Oct. 20
Iowa	April 25 June 20				Aug. 5 Sept. 30			June 1 July 15	July 1 Sept. 30		Sept. 15 Oct. 30				Aug. 1 Oct. 10
Kentucky		Aug. 15 Sept. 30			July 25 Aug. 30			May 15 June 15	July 1 July 31		Sept. 15 Nov. 15	April 25-June 1 Sept. 15-Oct. 10		Sept. 25 Oct. 25	Aug. 1 Oct. 20
Louisiana			May 1 -July 15 Oct. 1 -Nov. 15	Dec. 15 Feb. 28			May 1 Sept. 1		May 15 July 15	Oct. 1 Dec. 1				Oct. 1 Feb. 1	June 1 Aug. 15
Maine			July 25 Aug. 25		Sept. 1 Sept. 30			July 15 Aug. 31	July 25 Sept. 15						
Maryland	April 20 June 30	Aug. 5 Oct. 15	June 15 Oct. 15	June 20 Aug. 15	July 20 Sept. 30			May 25 July 5	June 15 Aug. 15		Oct. 1 Nov. 1	April 1 -June 15 Oct. 15-Nov. 30	Oct. 1 Nov. 10	Sept. 10 Nov. 1	July 15 Oct. 15
Michigan	April 25 July 10	Aug. 25 Oct. 10	July 20 Sept. 30	Aug. 10 Nov. 30	Aug. 25 Sept. 25	Oct. 1 Nov. 25		June 20 July 20	July 15 Sept. 30		Sept. 10 Oct. 20	May 10-July 1 Sept. 20-Oct. 20	Sept. 5 Sept. 30		Aug. 10 Oct. 10
Minnesota	May 5 July 5	Aug. 15 Sept. 30	July 15 Aug. 31	July 20 Nov. 30	Aug. 10 Sept. 30			June 10 July 25	July 20 Sept. 30		Sept. 10 Oct. 30				
Mississippi			May 10-June 20 Sept. 25-Nov. 5				May 1 Sept. 1	June 1 July 15	May 15 June 30						June 15 July 15
Missouri		July 25 Oct. 25	June 15 Oct. 15		Aug. 1 Aug. 31			May 15 July 15	June 10 Sept. 30			May 1 June 15			
Montana					Aug. 25 Sept. 25			June 25 Aug. 25							
Nebraska			Aug. 10 Sept. 10		Aug. 15 Sept. 30			June 1 July 15			Oct. 1 Dec. 1				Aug. 10 Oct. 1
New Hampshire			July 25 Aug. 25		Sept. 1 Sept. 30				July 15 Sept. 15						
New Jersey	April 20 July 5	Aug. 1 Oct. 1	July 1 Sept. 30	July 1 July 25	July 25 Aug. 25			June 1 July 5	July 1 Aug. 10		Oct. 1 Nov. 1	June 5 -June 25 Oct. 1 -Nov. 20	Oct. 1 Nov. 15	Sept. 15 Nov. 15	July 25 Oct. 10
New Mexico			July 1 Sept. 30												
New York		Sept. 1 Oct. 20	July 10 Oct. 20	Aug. 1 Nov. 30	Aug. 25 Oct. 15	Sept. 10 Oct. 30		June 20 Aug. 5	Aug. 1 Sept. 30		Sept. 15 Nov. 1		Sept. 15 Nov. 1		Aug. 15 Oct. 15
North Carolina			July 1 Sept. 25						June 1 July 25	July 25 Oct. 15					July 15 Sept. 15
Ohio	April 25 July 5	Sept. 1 Oct. 10	July 15 Aug. 15	Aug. 1 Nov. 15	Aug. 1 Sept. 30			June 5 July 15	July 15 Sept. 25		Sept. 10 Nov. 20				Aug. 5 Oct. 15
Oklahoma			June 1 July 15		June 25 July 20			May 15 May 31	July 10 Oct. 31			Mar. 15-May 15 Nov. 1 -Dec. 31			July 1 Sept. 30
Oregon	April 10 June 30		July 10 Sept. 30	July 10 Nov. 30	Aug. 15 Sept. 30	Aug. 20 Oct. 15		May 15 July 31	July 10 Oct. 31		Oct. 1 Nov. 30	Sept. 1 Oct. 15	Oct. 10 Nov. 10		Aug. 15 Sept. 30
Pennsylvania	April 25 July 5	Aug. 1 Oct. 15	July 1 Sept. 20	July 20 Nov. 30	Aug. 1 Oct. 15	Sept. 15 Nov. 30		June 5 Aug. 5	Aug. 1 Sept. 25		Sept. 25 Nov. 15				Aug. 1 Oct. 20
South Carolina	April 15 June 1		May 10-June 30 Sept. 25-Nov. 15						May 20 July 5	July 20 Oct. 31					June 30 Aug. 15
South Dakota					Aug. 15 Sept. 25										
Tennessee		July 25 Sept. 30	July 1 Oct. 15	July 1 July 25	Aug. 5 Sept. 5			May 15 May 25		Aug. 1 Oct. 20	Sept. 15 Nov. 15	April 25-June 1 Sept. 15-Oct. 10		Oct. 1 Nov. 30	July 20 Oct. 15
Texas			Mar. 15-July 20 Oct. 15-Dec. 31	Nov. 15 May 15	June 20 July 15	Nov. 15 May 15			May 20 July 31			Nov. 25 Mar. 31		Oct. 1 Feb. 1	May 15-July 31 Dec. 1 -Jan. 15
Utah	May 20 June 5	Sept. 1 Oct. 15	July 15 Oct. 15	July 1 Aug. 31	Aug. 15 Sept. 25	Aug. 10 Oct. 15		June 10 Aug. 10	July 15 Sept. 30		Oct. 1 Nov. 15		Oct. 1 Nov. 15		Aug. 15 Oct. 15
Vermont			July 25 Aug. 31												

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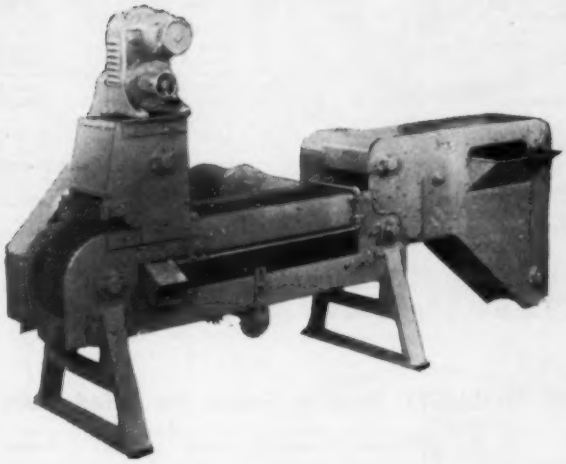
Automatic
Cherry, Olive, Date and Prune
Pitting Machines

Slicing Machines

Dicing Machines

Olive Stuffing Machines

All Equipment Leased Only



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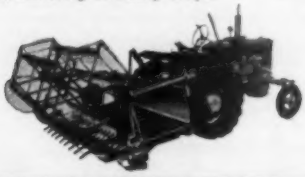
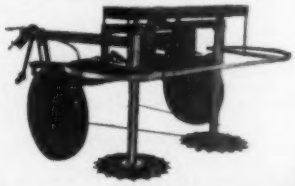
TRACTOR-ROWERS: Cut and windrow. Heavy duty design for fast, efficient handling of heavy crops.



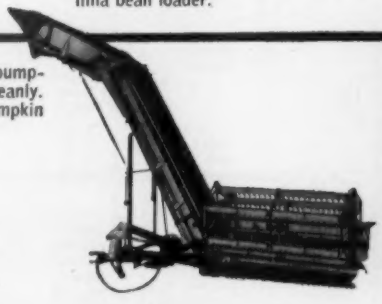
GREEN CROP LOADERS: Fast, dependable loading even under severe crop and weather conditions.

LIMA BEAN CUTTER: Cuts two rows at once, placing in single windrow. Cuts below crown, reducing pod damage. Harvests cleaner, with minimum of roots, dirt.



CUT-LODE HARVESTERS: For once-over harvesting of spinach, greens, green peas — converts to lima bean loader.

PUMPKIN LOADER: Loads pumpkins of varied sizes gently, cleanly. Also available: Hume pumpkin windrower.



PEAS?
PUMPKINS?
SPINACH?
LIMA BEANS?

HARVEST THEM BETTER WITH HUME

H. D. HUME COMPANY
Mendota Il. Illinois
BRANCHES: Hume Products Corporation
Mechanicsburg, Penna. Beaver Dam, Wisconsin

Reference Data

RAW PRODUCTS: Processing Season for Vegetables (Continued)

States and Territories	Asparagus	BEANS		Beets	Corn	Carrots	Okra	Peas	Fresh Pack Pickles	Pimientos	Pumpkin	Spinach	Squash	Sweet Potatoes	Tomatoes
		Lima	Snap												
Virginia	May 1 June 10	Aug. 1 Oct. 31	June 15 Oct. 31		July 15 Aug. 31			May 10 June 10	June 25 Aug. 25			Mar. 15-May 15 Nov. 15-Feb. 20		Sept. 15 Nov. 15	July 15 Sept. 15
Washington	April 10 July 1	Sept. 1 Oct. 15	July 1 Sept. 20	Aug. 1 Oct. 5	July 20 Oct. 20	July 25 Nov. 20		June 1 Aug. 31	July 1 Sept. 30		Oct. 1 Nov. 30	April 1 -June 15 Sept. 1 -Oct. 10	Oct. 10 Nov. 10		Aug. 10 Oct. 15
Wisconsin	May 5 July 25	Aug. 10 Oct 15	July 15 Sept. 20	July 1 Nov. 15	Aug. 10 Oc.. 5	July 25 Nov. 20		June 15 Aug. 10	July 20 Oct. 15		Sept. 10 Nov. 20	May 20-June 20 Sept. 10-Nov. 1	Sept. 10 Nov. 20		Aug. 15 Oct. 10
Wyoming			July 25 Sept. 25		Aug. 25 Sept. 25										
Ontario, Canada	May 5 June 30		July 15 Sept. 25	Aug. 1 Mar. 1	Aug. 25 Oct. 10	Oct. 1 Jan. 15		June 25 Aug. 1			Oct. 1 Nov. 15	May 25-June 20 Sept. 20-Oct. 18			Aug. 20 Oct. 15
Quebec, Canada			June 25 Sept. 25	Oct. 1 Dec. 1	Aug. 25 Oct. 10	Oct. 1 Dec. 1		July 1 Aug. 5			Oct. 1 Oct. 15				Aug. 15 Oct. 10
Vancouver, B.C.	May 15 June 15		Aug. 1 Sept. 30		Sept. 1 Oct. 15			June 20 Aug. 1			Oct. 1 Nov. 30				Aug. 1 Oct. 15

RAW PRODUCTS: Packing Season for Dried Fruits and Nuts

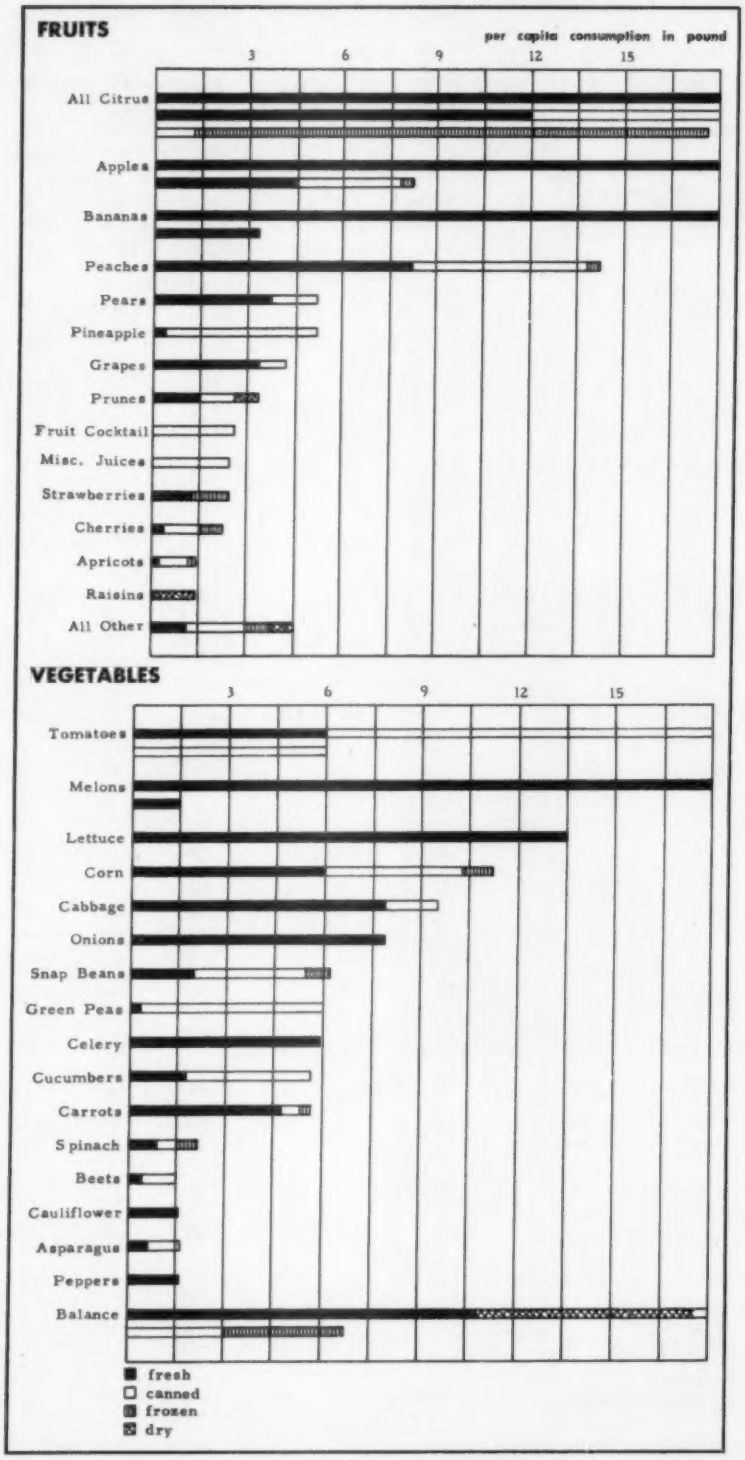
	Apples	Apricots	Dates	Figs	Peaches	Pears	Prunes	Raisins	Almonds	Filberts	Walnuts
California Heavy Season	Aug 1 Nov 30	Jul 1 Aug 30	Oct 1 Dec 15	Aug 15 Dec 15	Aug 1 Nov 30	Sep 1 Nov 30	Sep 1 Nov 30	Sep 15 Dec 15	Aug 15 Oct 15		Sep 20 Dec 15
Total Season	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31	Jan 1 Dec 31		Jan 1 Dec 31
Washington-Oregon Heavy Season	Oct 15 Dec 15						Oct 1 Nov 30			Oct 15 Dec 15	Oct 15 Dec 15
Total Season	Jan 1 Dec 1						Jan 1 Dec 1			Jan 1 Dec 31	Jan 1 Dec 31

RAW PRODUCTS: Opening and Closing Dates for Fish and Seafoods

States and Territories	Cod	Clams	Herring	Oysters	Salmon	Sardines	Shrimp	Tuna
Alabama		May 1 Nov 30		Sep 1 Mar 31			Aug 1 Jun 30	
Alaska					May 1 Nov 1			
California						Aug 1 Mar 1		All Year
Florida							Aug 1 Jun 30	
Georgia				Sep 1 Mar 31			Aug 1 Jun 30	
Louisiana				Sep 1 Mar 31			Aug 1 Jun 30	
Maine	Mar 1 Jun 1	Sep 15 Jun 1				Apr 5 Nov 30		
Maryland			Mar 15 May 15	Oct 1 Apr 30				
Massachusetts	Mar 1 Jun 1							
Mississippi				Sep 1 Mar 31			Aug 1 Jun 30	
Oregon	Oct 1 Nov 30	Mar 1-Oct 1 Jun 1-Nov 30	Jun 1 Oct 1		May 1-Aug 25 Sep 10-Nov 30			Jul 15 Oct 1
Texas				Sep 1 Mar 31			Apr 1-Jun 30 Sep 15-Dec 1	
Virginia			Mar 10 May 10					
Washington		Mar 1 Jun 1	Jun 1 Oct 1	Sep 15 Apr 30	May 1 Nov 30			Jul 15 Oct 1
Vancouver, B.C., Canada		Oct 1 Dec 31	Sep 25 Mar 1		May 1 Nov 30			

Raw Products: Per Capita Consumption

The two charts show the utilization of major fruit and vegetable products. The data were assembled by Allan W. Proudfoot, now with Best Foods, and appeared as a part of his Masters thesis for Northwestern University, Evanston, Ill. Data were from the 1959-60 crop year.



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Every lot of Baker's Calcium Chloride is controlled to conform to all the requirements of the current U.S. Pharmacopoeia. The product is in the form of the dihydrate and is free-flowing for easy handling. Available for scheduled deliveries in truckload or lesser quantities.

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_____ Ammonium Chloride, U.S.P. Granular
_____ Ammonium Sulfate, Purified Granular
_____ Ferrous Sulfate, U.S.P. Exsiccated
_____ Iron, N. F. Powder
_____ Potassium Bromate, Purified Powder
_____ Potassium Iodate, Purified Powder
_____ Potassium Iodide, U.S.P. Granular
_____ Potassium Iodide, Calcium Stearate, Purified 90-100% Mixture

Name_____
Firm_____
Address_____
City_____ Zone____ State_____

J. T. Baker Chemical Co.
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Hang a Cook-Chex tag on every basket before it goes into the retort and eliminate all guess-work when it comes out of the retort. On each Cook-Chex tag, a **chemically impregnated circle** turns from purple to green, to provide infallible proof of proper and complete "in-can" processing. Cannery inspectors approve and recommend Cook-Chex. Major packers all over the world use them to:

1. Eliminate wrong cook schedules.
2. Guard against "by passing" retorts.
3. Warn of any failure in retort processing.
4. Keep retort baskets in sequence.
5. Provide low-cost permanent records for cooking plants.

The cost of Cook-Chex protection is negligible... less than one cent for 75 cases of No. 300 cans.

SEND FOR FREE TEST SUPPLY TODAY

You'll receive a generous supply of Cook-Chex at no cost; send your name, title, and plant address to Dept. CP 9

ATI Aseptic-Thermo Indicator Company

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Reference Data

RAW PRODUCTS: Plant Food Removals of Selected Fruit and Vegetables for Processing

	Acre Yield	Nitrogen	Available Phosphate	Potash	Total
Apples	500 bu.	30	10	45	63
Asparagus	1 ton	64	32	80	176
Beans, dry	30 bu.	75	25	25	125
Straw		22	7	31	60
	Total	97	32	56	185
Beans, limas	1 ton	55	12	26	93
Forage	4 tons	40	12	87	139
	Total	95	24	113	232
Beans, snap	2 tons	95	7	12	114
Forage	8 tons	40	5	40	85
	Total	135	12	52	199
Beets	10 tons	50	10	35	95
Tops	6 tons	10	10	60	80
	Total	60	20	95	175
Cabbage	20 tons	130	35	130	295
Carrots	15 tons	60	20	65	145
Tops	7 tons	70	10	125	205
	Total	130	30	190	340
Corn, sweet—					
Ears & Husks	2 tons	15	2.5	8	25.5
Stalks	4 tons	31	9.7	16	56.7
	Total	46	12.2	24	82.2
Cucumbers	2.5 tons	50	10	15	75
Onions	7.5 tons	45	20	40	105
Oranges (70 lb. boxes)	800 boxes	85	30	140	255
Peaches	600 bu.	35	20	65	120
Peas, green	1 ton	20	5	10	35
Forage	6 tons	30	10	25	65
	Total	50	15	35	100
Spinach	5 tons	50	15	30	95
Squash	8.8 tons	18.2	6.9	30.6	55.7
Vines	8.7 tons	55.6	7.4	70.9	133.9
	Total	73.8	14.3	101.5	189.6
Sweet potatoes	300 bu.	45	15	75	135
Vines		30	5	40	75
	Total	75	20	115	210
Tomatoes	15 tons	90	30	120	240
Turnip (Roots)	10 tons	45	20	90	155
Peanuts	1.25 tons	90	10	15	115
Potatoes	400 bu.	80	30	150	260
Tops	10 tons	95	15	140	250
	Total	175	45	290	510
Soybeans	40 bu.	150	35	55	240
Sugar beets—roots	15 tons	60	20	50	130
Tops		60	23	92	175
	Total	120	43	142	305
Sugarcane	30 tons	96	54	270	370

—National Plant Food Institute, National Canners Assn.

RAW PRODUCTS: Weights and Measures

Commodity	Unit	Approximate Net Weight
Apples	Bushel	48
Apricots	Lug	24
Artichokes	Bushel	50
Asparagus	Bushel	50
Beans, Lima, dry	Bushel	56
Beans, other, dry	Bushel	60
Beans, Lima, unshelled	Bushel	32
	Bushel	30
Beans, snap	Bushel	52
Beets, w/o top	12-qt. crate	36
Blackberries	Wirebound crate	50
Cabbage	Bushel	50
Carrots	1½ Bu. Crate	37
Cauliflower	Crate	60
Celery	Lug	16
Cherries	¼-barrel box	25
Cranberries	24-qt. crate	36
Cucumbers	Bushel	48
Dewberries	Box	65 & 80
Grapefruit	Lug	28
Grapes	Gallon	11.78
Honey	Bushel	35
Horseradish roots	Bushel	18
Kale	Box	79
Lemons, Calif.	Box	80
Limes, Fla.	Gallon	11.03
Maple Sirup	Gallon	11.72
Molasses	Lug	25-30
Olives	Sack	50
Onions, dry	Box	77-90
Oranges	Gallon	7.5
Palm oil	Lub	20
Parsnips	Bushel	50
Peaches	Gallons	7.7
Peanut oil		
Peanuts, unshelled:	Bushel	22
Virginia type	Bushel	28
Runners	Bushel	30
Spanish	Lug	46
Pears	Bushel	30
Peas, green	Bushel	60
Peas, dry	Bushel	25
Peppers	Crate	70
Pineapples	Bushel	56
Popcorn, shelled	Bushel	60
Potatoes	Crate	36
Raspberries	Bushel	45
Rice, Rough	Bushel	40
Spinach	Crate	36
Strawberries	Gallon	11.45
Sugarcane sirup	Bushel	55
Sweet potatoes	Bushel	53
Tomatoes	Bushel	54
Turnips		

—U.S. Department of Agriculture

PACKAGED GAS SYSTEMS PACKAGED GAS SYSTEMS PACKAGED GAS SYSTEMS

Reference Data

RAW PRODUCTS: Gross Weights in Pounds of Fruits Needed to Fill a Dozen Cans

	No. 2	No. 2½	Syrup No. 10	Water No. 10
Apples				140
Beans	12			61
Beets	21			85
Blackberries	12		60	66
Broccoli		55		228
Black Cherries	12	18	60	66
Black Cherries, pitted	16	24	80	80
R.S.P. Cherries	16	24	80	80
Gooseberries	12		57	57
Loganberries	12		60	66
Bartlett Pears	16	28	97	105
Plums		18	60	60
Italian Prunes		18	60	60
Pumpkin		36		126
Black Raspberries	12		60	66
Red Raspberries	12		60	66
Strawberries	12.5		63	68

—Northwest Canners Assn.

HAMACHEK

Brings You Everything

IN PEA AND LIMA BEAN
HULLING EQUIPMENT For

Canning-Freezing Operations

This complete outstanding line includes:

Viners: Pre-Grade Viners, Ideal and White Style Feeders for vine feeding, Key Equipment Co. Vine Feed Regulators (Chinamen) and Hoists; Jarrell Feeders for feeding vines; Belt Style Feeders for tandem threshing or feeding pods; Viner Power Plants; Rotary Dirt Removers for lima beans; Ensilage Distributors; Steel Viner Sheds; Galvanized Field Boxes for shelled peas; Fibre Glass Hopper Trucks and Tote Bins; and Generator Plants for electric lights at viner stations.

Frank HAMACHEK MACHINE COMPANY

Consultation On Your Hulling Problem Is Invited.

Established 1880 Kewaunee, Wisconsin

PEA AND BEAN HULLING SPECIALISTS

RAW PRODUCTS: Field/Containers

Type of Container	Capacity
Lug Boxes:	
Standard Western picking box for fruit.	50 lbs.
Standard Mid-West and East Picking Box	36 lbs.
Northwest Apple Box	45 lbs.
Eastern Apple Box	55 lbs.
Brentwood Lug	24 lbs.
Cherry Lug	16 lbs.
Bushel, Standard U.S.	2,150.42 cu in.
Hampers, crates Tomato	5/8 bu. or 33 lbs.
James Crate (tomato)	4/5 bu. or 35 lbs.
Pallet Boxes Wirebound for bulk Vegetables	25 bu.
Wirebound for Northwest Apples	22 bu.
Wirebound for Calif./-Ariz. Citrus	25 bu.
Wirebound for Virginia Apples	22 bu.
Wirebound for New Jersey Apples	19 bu.
Wirebound for Michigan Apples	17 bu.

—U.S. Department of Agriculture, National Wirebound Box Association, Package Research Laboratory, National Wooden Box Assn.

Reference Data

RAW PRODUCTS: Conversion Factors

Commodity	Unit	Approximate equivalent
Apples	1 pound dried	8 pounds fresh
Do	1 pound chops	5 pounds fresh
Do	1 barrel	3 boxes or 3 bushel
Do	1 case canned[1]	1.4 bushels fresh
Applesauce	1 case canned[1]	1.2 bushels fresh
Apricots	1 pound dried	5½ pounds fresh
Beans, lima	1 pound shelled	2 pounds unshelled
Beans, snap	1 case canned[2]	0.010 tons fresh
Cane sirup	1 gallon	5 pounds sugar
Cherries, sour	1 case canned[1]	0.023 tons fresh
Chickens	1 pound live wt.	0.89 lbs. N.Y. dressed
Do	do	0.65 lbs. ready-to-cook
Corn, sweet	1 case canned[2]	0.038 tons fresh
Eggs, shell	1 pound	0.87 lbs. frozen or liquid whole
Do	do	0.23 lbs. dried whole
Figs	1 pound dried	3 lbs. fresh in Calif.; 4 lbs. fresh elsewhere
Grapefruit, Fla.	1 case juice[2]	0.83 box fresh fruit
Maple sirup	1 gallon	8 pounds maple sugar
Nuts:		
Almonds	1 pound shelled	2 pounds unshelled
Brazil	do	2 pounds unshelled
Cashews	do	4.55 pounds unshelled
Chestnuts	do	1.19 pounds unshelled
Filberts	do	2.5 pounds unshelled
Pecans:		
Seedling	do	2.78 pounds unshelled
Improved	do	2.50 pounds unshelled
Pignolias	do	1.3 pounds unshelled
Pistachios	do	2 pounds unshelled
Walnuts:		
Black	do	8⅓ pounds unshelled
English	do	2.56 pounds unshelled
Oranges, Fla.	1 case canned juice[2]	0.63 box fresh
Peaches, Calif, frees	1 pound dried	5½ pounds and 6½ pounds fresh
Peaches, Calif., clings.	do	7½ pounds fresh
Peaches, clings.	1 case canned[1]	1.0 bushels fresh
Do	do	0.0230 tons fresh
Peanuts	1 pound shelled	1½ pounds unshelled
Pears	1 pound dried	5½ pounds fresh
Pears, Bartlett	1 case canned[1]	1.1 bushels fresh
Do	do	0.026 tons fresh
Peas, green	1 pound shelled	2½ pounds unshelled
Do	1 case canned[2]	0.010 tons fresh (shelled)
Prunes	1 pound dried	2½ lbs. fresh in Calif; 3 to 4 lbs. fresh elsewhere
Raisins	1 pound	4 pounds fresh grapes
Rice, milled	100 pounds	152 pounds rough
Sugar	1 ton raw	0.9346 tons refined
Tomatoes	1 case canned[2]	0.027 tons fresh
Turkeys	1 pound live wt.	0.90 lbs. N.Y. dressed
Do	do	0.75 lbs. ready-to-cook

[1] Case of 24 number 2½ cans.
[2] Case of 24 number 2 cans.

MARKETING/QUALITY CONTROL: Agricultural Experiment Stations

Alabama station: Auburn. Substations: Marion Junction, Clanton, Fairhope, Camden, Cullman, Camp Hill, Belle Mina, Winfield, Headland.

Alaska station: Palmer.

Arizona station: Tucson. Substations: Tempe, Mesa, Safford, Yuma.

Arkansas station: Fayetteville. Branch stations and substations: Marianna, Batesville, Keiser, Stuttgart, Rohwer, Hope, Clarkedale, Clarksville, Nashville, Bald Knob, Van Buren.

California stations: Berkeley, Davis, Los Angeles, Riverside. Substations: Lancaster, Hopland, El Centro, San Jose, Santa Ana, Tulelake.

Colorado station: Fort Collins. Branch stations: Rocky Ford, Akron, Hesperus, Center, Springfield, Greeley, Austin.

Connecticut stations: New Haven, Storrs. Substation: Windsor. Delaware station: Newark. Subs: Georgetown.

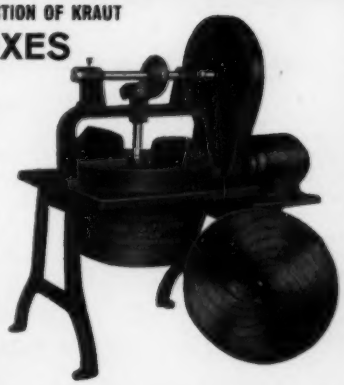
Florida station: Gainesville. Branch stations: Sanford, Lake Alfred, Belle Glade, Quincy, Bradenton, Ona, Homestead, Live Oak, Brooksville, Jay. Labs: Hastings, Lakeland, Leesburg.

Georgia stations: Tifton, Experiment. Substation: Blairsville. Hawaii station: Honolulu. Substations: Makawao, Maui; Kealakekua, Hawaii; Waialua, Oahu; Waimanalo, Oahu.

Idaho station: Moscow. Branch stations: Aberdeen, Caldwell, Parma, Sandpoint, St. Anthony, Kimberly.

Buffalo MODEL 10-A KRAUT CUTTER

...*for* LOW-COST HIGH VOLUME PRODUCTION OF KRAUT and SALAD MIXES



For New, Bigger Profits...
Economical salad mix production with the Buffalo Model 10-A Kraut Cutter. Produce large quantities of chopped green vegetables at remarkably low cost.

Rugged Construction, Simple Operation...
Standard equipment in leading canneries, the Buffalo Kraut Cutter is designed for long, hard service.

Knives of Finest Tool Steel...
Ground to incredible sharpness, the knives stay sharp for fast, clean cutting. Sweeping draw cut reduces vegetables to eye-appealing slivers without heating or crushing.

AVAILABLE with built-in 2 horsepower motor or pulley drive. Write for data and price or call our local representative.

John E. Smith's Sons Co.
50 BROADWAY • BUFFALO 3, N. Y.
Sales and Services in Principal Cities

Conveying products at low, sub-zero temperatures... that's a job for TON-TEX Kold-Pruf BELTING

- The Ton-Tex Corporation now offers an amazing *new* Conveyor Belt for "cold-room" service where frigid, hard-freezing temperatures run far below zero. Whether the service is "totally-in" or "in-and-out" KOLD-PRUF will operate more efficiently and last longer.
- KOLD-PRUF is an ideal belt to use on low-temperature refrigeration or deep-freeze installations, and in dry ice and ice cream manufacturing plants. It is made of plies of selected cotton duck welded together with special compounds so as to withstand the rugged service demanded. Even at low temperatures, KOLD-PRUF remains unusually flexible, and the friction heat developed in operating is sufficient to maintain pulley-grip and prevent belt slippage.
- Got a "cold-room" conveyor belt problem? Without obligation let our Engineering Department explain what KOLD-PRUF BELTING can do for you.

TON-TEX CORPORATION, GRAND RAPIDS 2, MICH.

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TON-TEX CONVEYOR AND TRANSMISSION BELTING

Monitor

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CANNING MACHINERY OF QUALITY

FOR

PEAS—LIMA BEANS—TOMATOES—STRING BEANS

APPLES—CHERRIES—BERRIES—ETC.

Manufacturers of the Famous

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WHIRLPOOL BLANCHER
PEA CLEANER
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"Monitor"
CHERRY PITTER
ROD CYLINDER TOMATO WASHER
GRAPE WASHER

AND MANY MORE

HUNTLEY MANUFACTURING CO.
BROCTON, NEW YORK

Reference Data

Illinois stations: Urbana, Robbs.

Indiana station: Lafayette. Substations: Farmland, Carmel, Upland, Bedford, North Liberty, Lafayette, Wanatah, Cuzco, Owensville.

Iowa station: Ames.

Kansas station: Manhattan. Branch stations: Colby, Hays, Garden City, Mound Valley, Tribune.

Kentucky station: Lexington. Substations: Quicksand, Princeton.

Louisiana station: Baton Rouge. Branch stations: Hammond, Jeanerette, St. Joseph, Calhoun, Homer, Port Sulphur, Bossier, Crowley, Franklinton, Deridder.

Maine station: Orono. Farms: Presque Isle, Addison, Monmouth.

Maryland station: College Park.

Massachusetts station: Amherst. Substations: East Wareham, Waltham.

Michigan station: East Lansing. Substations: Sault Sainte Marie, Grand Rapids, Tipton, Lake City, South Haven, Chatham, Augusta.

Minnesota station: St. Paul. Substations: Grand Rapids, Duluth, Crookston, Rosemount, Waseca, Morris.

Mississippi station: State College. Substations: Brooksville, Raymond, Newton, Stoneville, Natchez, Holly, Verona, Pontotoc, Poplarville, Crystal Springs, West Point.

Missouri station: Columbia. Outlying Fields: Hannibal, Sikeston, Pierce City, Spickard.

Montana station: Bozeman. Branch stations: Moccasin, Sidney, Corvallis, Huntley, Havre, Kalispell, Miles City.

Nebraska station: Lincoln. Substations: Alliance, Crawford, Concord, North Platte, Mitchell.

Nevada station: Reno.

New Hampshire station: Durham.

New Jersey station: New Brunswick. Substations: Pemberton, Sussex, Bivalve, Vineland, Millville.

New Mexico station: State College. Substations: Alcade, Los Lunas, Tucumcari, Clovis, Artesia.

New York stations: Ithaca, Geneva.

North Carolina station: Raleigh. Research stations: Whiteville, Clayton, Raleigh, Willard, Faison, Castle Hayne, Greenville, Fletcher, Waynesville, Lewiston, Salisbury, Jackson Springs, Plymouth, Rocky Mount, Laurel Springs, Rural Hall.

North Carolina station: Greensboro.

North Dakota station: Fargo. Substations: Dickinson, Edgeley, Hettinger,

Get rid of Splits, Skins, Pods, Leaves!

Canners, freezers, dry food packers find that T&C's revolutionary new VACU-CLEANER is the efficient way to eliminate unwanted material from berries, grains and vegetables, without damage to the product.

VACU-CLEANERS have no shakers, gears or valves, thus are easy to operate and maintain. They are used in the plant, or attached to harvesters in the field. Both stationary and portable models are offered.

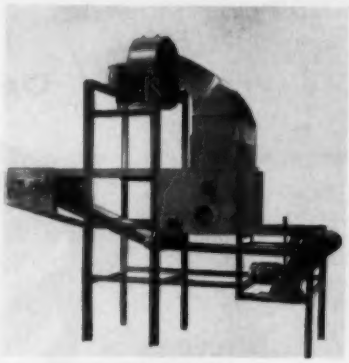
For information, write or wire

T&C MANUFACTURING CO.

P.O. Box 1934 Modesto, Calif.

Phone LAmbert 3-5283

◀ Stationary Model



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PEA VINER SEPARATING APRONS CANVAS & NEOPRENE

For Stationary Viners and Combines

Complete line of canvas and neoprene tail aprons, chaff belts, side curtains, etc.

Canvas and Neoprene Cement

Write for our price list before buying.

DOW CANVAS PRODUCTS, INC.

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Food Processing Machinery

for

Fruit, Berries and Vegetables

Washers Slicers

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Since 1932

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Porter-way Harvester . . .

Versatile, Money-Saving Cutting and Loading Machine

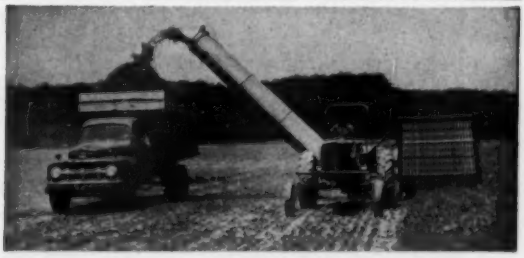
BROCCOLI HARVESTER

The PORTER-WAY BROCCOLI HARVESTER saves 75% on labor. 10 men walk behind conveyors, cut broccoli and place it on belts. Broccoli is carried to bushel baskets on machine platform, where over 100 bu. can be stacked.

On spinach, turnip greens, mustard, kale, collards, peas and lima beans, one man can cut and load; capacity 100 tons per day. New, improved cutter bar on PORTER-WAY HARVESTER is flexible; cuts close to ground.

PORTER-WAY HARVESTER MANUFACTURING COMPANY

WATERLOO, N.Y.

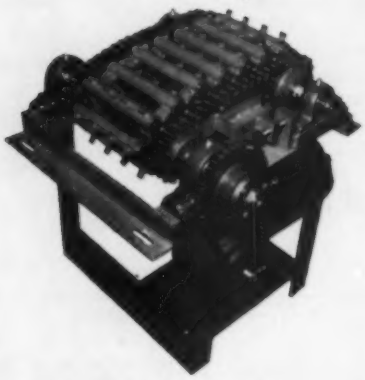


PEAS

TURNIP GREENS

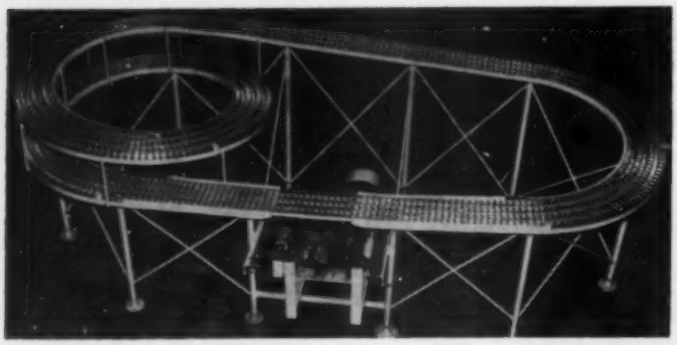
SPINACH

THE POINT OF NO RETURN!



ASHWORTH'S *NEW* TRACTION DRIVE ELIMINATES TRANSFERS & RETURN!

This new flat-surface traction drive, developed by Ashworth Bros. of Winchester, Va., provides positive and continuous propulsion for flat wire belts, eliminating completely the need for transfers and belt return. The traction drive unit may also be employed as a booster drive for flat wire belts operating in the conventional manner over terminal sprockets or pulleys. The drive is positive. There is no slippage and hold-downs are not required. Lack of vibration assures perfect product registration.



Here shown, the drive used in conjunction with the Ashworth "Omniflex" turntable belt. Note the entire belt length is utilized. All other belts must operate over terminal rolls or sprockets, with approximately only 50% of the belt surface usable for processing or load carrying. This combination provides 100% uninterrupted, usable surface.

For a single drive unit, the total allowable belt load range is 325 to 500 lbs., with the belt speed and conveyor bed friction-factor determining absolute range. Used in series, load range is increased proportionately. Belt speeds up to 115 f.p.m., belt widths up to 36 inches. The smooth action of this new traction drive insures maximum belt life.

FOR DETAILED INFORMATION & SPECIFIC OPERATIONAL DATA, WRITE

ASHWORTH BROS., INC.
WINCHESTER, VIRGINIA
Sales Offices in Principal Cities

Langdon, Minot, Williston.

Ohio stations: Columbus, Wooster. Substations: Canfield, Willard, Vickery, Hoytville, Carpenter, Ripley, Cortland, Marietta, South Charleston.

Oklahoma station: Stillwater. Special stations: Chickasha, Stilwell, El Reno, Altus, Idabel, Goodwell, Stratford, Sparks, Perkins, Guthrie, Mangum, Coalgate, Heavner, Tipton, Woodward, Bixby, Pawhuska, Cherokee.

Oregon station: Corvallis. Branch stations and experimental areas: Redmond, Union, Portland, Astoria, Klamath Falls, Ontario, Hood River, Aurora, Pendleton, Oregon City, Moro, Medford, Burns, Hermiston.

Pennsylvania station: University Park.

Puerto Rico station: Rio Piedras.

Rhode Island station: Kingston.

South Carolina station: Clemson. Substations: Johnsonville, Summerville, Blackville, Florence, Columbia, Charleston.

South Dakota station: College Station. Substations: Buffalo, Highmore, Eureka, Cottonwood, Presho, Newell.

Tennessee station: Knoxville. Substations: Lewisburg, Springfield, Spring Hill, Crossville, Greeneville, Jackson.

Texas station: College Station. Substations: Angleton, Beaumont, Beeville, Big Springs, Riesel, Chillicothe, Greenville, Waco, Denton, Brownsville, Gonzales, Iowa Park, Jacksonville, Kirbyville, Kerrville, Lubbock, Lufkin, McGregor, Marfa, Montague, Mt. Pleasant, Nacogdoches, Brownwood, Center, Prairie View, Sonora, Bushland, Spur, Stephenville, Temple, Trans-Pecos, Tyler, Weslaco, Crystal City, Yoakum Ysleta.

Utah station: Logan.

Vermont station: Burlington.

Virginia station: Blacksburg. Outlying Research Stations: Chatham, Warsaw, Front Royal, Middleburg, Orange, Steeles Tavern, Charlotte Court House, Glade Spring, Holland, Petersburg. Outlying laboratories: Charlottesville, Winchester.

Washington station: Pullman. Substations: Long Beach, Lind, Prosser, Mt. Vernon, Vancouver, Wenatchee, Puyallup.

West Virginia station: Morgantown. Substations: Pt. Pleasant, Reedsville, Wardensville, Kearneysville.

Wisconsin station: Madison. Substations: Ashland, Spooner, Sturgeon Bay, Hancock, Marshfield, LaCross.

Wyoming station: Laramie. Experiment farms: Afton, Cheyenne, Gillette, Powell, Sheridan, Torrington.

MARKETING AND QUALITY CONTROL: List of USDA Standards for Grades of Processed Foods

(As of August 1, 1961)

Canned and similarly processed)	Effective
Apples	Oct. 17, 1953
Apple butter	August 5, 1957
Apple juice	June 26, 1950
Applesauce	Sept. 18, 1950
Apricots	June 22, 1961
Asparagus	Mar. 12, 1957
Beans, dried	Oct. 24, 1947
Beans, green and wax	Mar. 2, 1953
Beans, lima	Mar. 20, 1960
Beets	Feb. 4, 1955
Blackberries and other similar berries.	Dec. 1, 1956
Blueberries	Mar. 20, 1951
Amended	Aug. 19, 1959
Carrots	July 2, 1959
Cherries, red sour (tart) pitted	June 23, 1949
Cherries, sweet	Feb. 25, 1957
Amended	July 15, 1960
Chili sauce	Oct. 20, 1953
Corn, cream style	July 27, 1953
Corn, whole kernel (or whole grain)	July 30, 1952
Cranberry Sauce	Mar. 19, 1951
Figs, kadota	August 16, 1957
Fruit cocktail	August 17, 1953
Fruit jelly	Jan. 2, 1948
Fruit preserves (or jams)	May 25, 1956
Fruits for salad	July 5, 1960
Grapes	Sept. 6, 1960
Grapefruit	Nov. 6, 1959
Grapefruit juice	Oct. 19, 1954
Grapefruit juice for manufacturing	Mar. 20, 1957
Grapefruit and orange juice, blended	Oct. 19, 1954
Grapefruit and orange for salad	Jan. 21, 1960
Grape juice	May 14, 1951
Hominy	Mar. 10, 1958
Lemon juice	July 1, 1941
Lemon juice, concentrated for manufacturing	Aug. 1, 1959
Mushrooms	Jan. 19, 1953
Okra	July 8, 1957
Olives, green	June 1, 1946
Olives, ripe	Nov. 16, 1959
Onions	Nov. 2, 1957
Orange juice	Mar. 13, 1956
Amended	Jan. 21, 1960
Orange juice, concentrated	Dec. 12, 1953
Orange juice, concentrated for manufacturing	Dec. 20, 1957
Orange marmalade	June 22, 1951
Peaches, freestone	July 22, 1957
Peaches, yellow clingstone	July 23, 1961
Pears	Dec. 1, 1951
Peas	May 13, 1955
Peas, field and black-eye	April 17, 1950
Pickles, cucumber	April 30, 1954
Pimientos	Aug. 16, 1955
Pineapple	Mar. 16, 1957
Pineapple juice	Mar. 16, 1957
Plums	August 19, 1952
Potatoes, white	Feb. 10, 1950
Prunes, canned dried	Mar. 1, 1946
Pumpkin (squash)	Mar. 9, 1956
Raspberries, Red	Mar. 1, 1958
Sauerkraut	May 10, 1957
Spinach	May 12, 1950
Squash (Summer type)	May 25, 1959
Succotash	Mar. 15, 1944
Sweet potatoes	July 9, 1951
Tangerine juice	July 29, 1949
Tangerine juice, concentrated for manufacturing	Oct. 31, 1955
Tomatoes	August 1, 1946
Tomato catsup	August 31, 1953
Tomato juice	June 24, 1958
Tomato juice, concentrated	July 15, 1960
Tomato paste	Sept. 15, 1944
Tomato pulp	Jan. 1, 1945
Tomato sauce	May 10, 1954
Amended, Oct. 21, 1960	
Tomatoes & okra	Dec. 24, 1957

Dried or Dehydrated (Low-moisture, if so stated)	
Apples	Oct. 24, 1955
Apples, dehydrated (low moisture)	Nov. 29, 1955
Apricots	June 1, 1945
Apricots, dehydrated, low-moisture	Nov. 30, 1959
Currants	Aug. 29, 1958
Dates	August 26, 1955
Figs	Dec. 27, 1955
Grapefruit juice (dehydrated)	Mar. 19, 1956
Orange juice (dehydrated)	Jan. 27, 1956
Peaches	June 30, 1945

Any of the United States Standards for Grades listed may be secured upon request from: Processed Products Standardization and Inspection Branch, Fruit and Vegetable Div., AMS U. S. Department of Agriculture Washington 25, D. C.

DON'T Lose this copy of the Canner/Packer Yearbook Number Replacements Are $1.00 Each.

LAST YEAR WE CELEBRATED OUR 75th ANNIVERSARY

As we look forward to our centennial we are conscious of our responsibility to the canning and freezing industry of New York State, and the nation, and the tremendous consumer public that buys our products. Some of our processors have already had over one-hundred years of experience.

Ever mindful of a quality pack, we will strive to maintain and improve our products through research and quality control. Our climate puts flavor and color in our fruits and vegetables.

Millions of cases of canned foods and millions of pounds of frozen foods are processed by our members each year. Varieties are practically unlimited.

Favorable freight rates to the large consuming centers as well as the superior service by all modes of transportation saves money and time on delivery.

WHAT BETTER COMBINATION OF FACTORS COULD YOU ASK FOR?
A LIST OF PROCESSORS AND PRODUCTS WILL BE SENT ON REQUEST.

NEW YORK STATE CANNERS AND FREEZERS ASSOCIATION, INC.
416 FIRST FEDERAL SAVINGS BUILDING
ROCHESTER, NEW YORK

BERLIN CHAPMAN SINCE 1908
FOOD PROCESSING MACHINERY
ASSURES THE QUALITY OF YOUR PRODUCTS... PLUS HIGH CAPACITY

BERLIN CHAPMAN
SHAKER GRADER

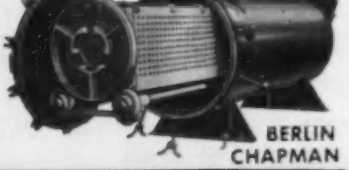
Available 12 ft. and 6 ft. sizes . . . a compact unit in any number of decks from three to six . . . designed for high capacity, rapid change over, and quick washout with minimum cost.

BERLIN CHAPMAN
RETORTS

Provides uniform distribution of steam during the sterilization process, so important to quality. All Berlin Chapman Retorts are electric welded and perfectly smooth on the inside . . . choice of screw clamps or eccentric closing clamps. Horizontal and small retorts, large size horizontal retort with two types of doors, made with various types of trucks and cages. Small retorts to meet demand where food is processed in small quantities.

BERLIN CHAPMAN
SCRUBBER-WASHER

To remove sand and grit from vegetables for fresh pack . . . capacity 3 to 10 tons per hour . . . flexible, adjustable. Bushes are adjustable to adequately take care of the varying sizes of vegetables as they are being processed. Overall length 12'6"; overall width 2'7".



BERLIN CHAPMAN
STERILIZER

For better retention of flavor, color, vitamins . . . usually set up in a battery of 4 or 5 for one line at 120 cans per minute . . . made in three sizes to hold thirty, twenty, or fifteen cases of tall cans. Equipped with one cage, one cage truck and one set of 96 trays.

WRITE today for complete information and engineering recommendations on equipment to meet your plant requirements.

BERLIN CHAPMAN CO.
BERLIN, WISCONSIN

Reference Data

Peaches, dehydrated, low-moisture	Nov. 30, 1959
Pears	June 30, 1945
Prunes	Nov. 26, 1956
Prunes, dehydrated low moisture	June 13, 1960
Raisins (processed)	Oct. 1, 1957

Frozen or Chilled (If so stated)

Apples	May 17, 1954
Apricots	June 30, 1945
Grades for mgf.	July 1, 1946
Asparagus	April 18, 1952
Beans, green and wax	August 25, 1954
Beans, lima	April 16, 1957
Berries (blackberries, boysenberries, etc.)	Aug. 15, 1946
Blueberries	May 7, 1955
Broccoli	Mar. 1, 1959
Brussels Sprouts	May 11, 1951
Carrots, diced	Mar. 30, 1953
Cauliflower	Nov. 12, 1951
Cherries, red sour (tart) pitted	June 18, 1949
Cherries, sweet	March 1, 1958
Corn-on-the-cob	May 15, 1958
Corn, whole kernel (or whole grain)	August 1, 1952
Grapefruit	Feb. 20, 1948
Grapefruit juice, concentrated	Dec. 28, 1956
Grapefruit juice and orange juice, concentrated, blended	Dec. 10, 1951
Grape Juice concentrated sweetened	No. 1, 1957
Leafy greens	June 13, 1952
Lemonade, frozen concentrate	Feb. 1, 1958
Amended	Aug. 4, 1959
Limeade, frozen concentrate	Nov. 2, 1956
Okra	Mar. 16, 1959
Onion rings, breaded	Oct. 17, 1959
Orange Juice, chilled	June 16, 1959
Amended	Dec. 10, 1959
Orange juice, concentrated	Dec. 1, 1955
Peaches	July 3, 1961
Peas	May 28, 1959
Peas and carrots	Mar. 20, 1955
Peas, field and black-eye	June 30, 1961
Peppers, sweet	Mar. 13, 1959
Pineapple	Jan. 25, 1949
Plums	Mar. 6, 1956
Potatoes, french fried	Nov. 20, 1954
Raspberries	August 16, 1948
Rhubarb	August 15, 1945
Spinach	Mar. 7, 1961
Squash (cooked)	Oct. 5, 1953
Squash (summer type)	April 3, 1953
Strawberries	Feb. 1, 1958
Succotash	Mar. 6, 1959
Turnip Greens with Turnips	Aug. 19, 1958
Vegetables, mixed	May 24, 1954

Sugar Products

Honey, comb	August 1933
Honey, extracted	April 16, 1951
Maple sirup for reprocessing	Feb. 15, 1940
Maple sirup, table	Feb. 15, 1940
Molasses, sugarcane	Nov. 16, 1959
Sirup, refiners'	Jan. 5, 1952
Sirup, sugarcane	April 16, 1957

Miscellaneous Products

Cherries, sulfured	June 12, 1951
Olive oil	Mar. 22, 1948
Olives, salt cured	Nov. 25, 1940
Olives Sicilian style	Nov. 25, 1940
Peanut butter	Sept. 1, 1942
Potatoes, peeled white (fresh)	June 8, 1954
Sauerkraut, bulk	May 27, 1935

MARKETING/QUALITY CONTROL: Field Offices of USDA Processed Products Standardization and Inspection Div.

Official inspection of processed foods is available from cities listed below which can be reached conveniently.

Applications for inspection should be addressed by mail, telegraph or telephone to Processed Products Inspection, Fruit and Vegetable Division, AMS, United States Department of Agriculture, at the cities listed below:

Eastern District

WASHINGTON 25, D. C., Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division; DUdley 8-6328.

FOREST PARK, GEORGIA, Atlanta State Farmers Market; POplar 7-6564.

BALTIMORE 2, MARYLAND, 534 Appraisers Stores Building; PLaza 2-8460 Ext. 694 & 695.

EASTON, MARYLAND, Post Ofice Bldg. (Mail: P. O. Box 762); TAlbot 2-3383.

MIAMI, FLORIDA, c/o Florida Juice, Inc., 2700 N. W. Second Ave.; FRanklin 3-7447.

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Abbe Refractometer

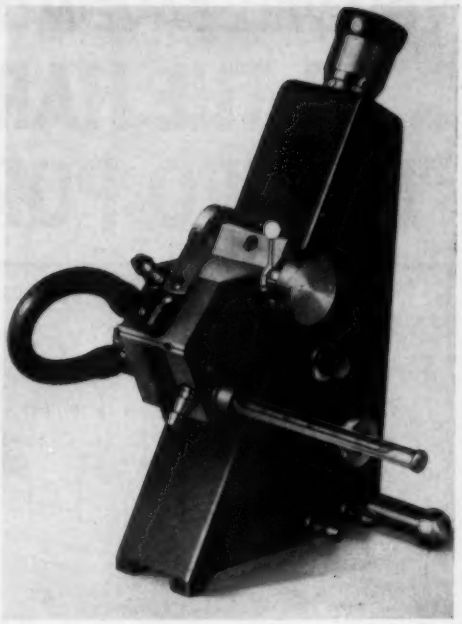
MODEL B with temperature controls

This instrument is specially designed for rugged use in canneries. Rapid measurements of samples can be carried out in quick succession.

By means of a temparature-control device, the jacketed measuring and illumination prisms can be heated to any temperature up to 100° C. Parts which come in contact with the test material are easily accessible for cleaning.

Each instrument is provided with a refractive index scale having a range from n_D =1.3 to n_D =1.71, and a sugar scale coving the range from 0 to 95%.

The refractive index scale is graduated in units of the third decimal. Readings can be made with an accuracy of one unit in the fourth decimal. The sugar scale is divided into intervals of 0.5% between 0 and 50%, and into intervals of 2% between 50 and 95%. Estimates can be made to 0.1%.



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PORTABLE ELECTRIC CAN OPENER

- Opens up to 1,000 cans per hour
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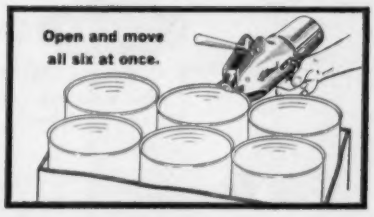
Pays for itself in short order. In large or small volume, the Edlund Portable's speed and durability will save you enough time and money to pay its cost many times over. And you'll save moving of heavy cans because the Edlund opens them anywhere. It operates with complete efficiency in any production set-up . . . single can, assembly line, cans in the case. In actual kitchen tests, it has opened hundreds of thousands of cans and still performs perfectly. Pistol grip with trigger on/off switch allows absolute cutting control. Die-cast aluminum construction gives strength without weight. Equipped with hang-up bracket. Lid magnet optional.



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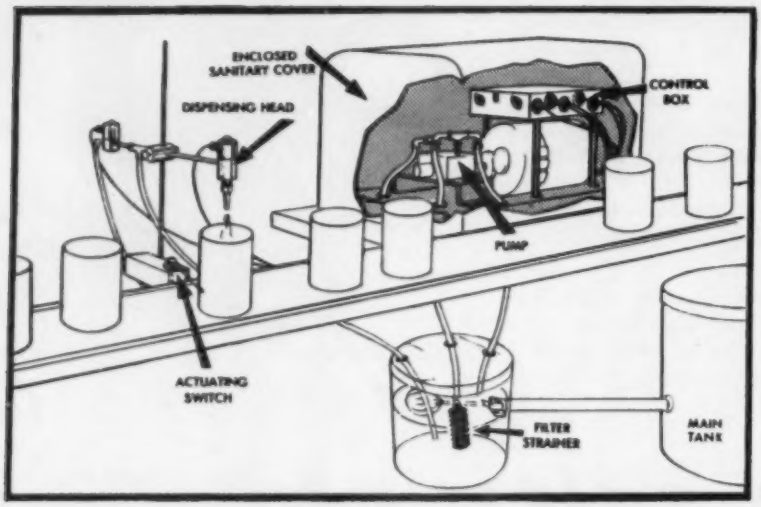
THE HARDY "ELECTRO-PORTIONER"



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NO WASTE INGREDIENTS — Save thousands of dollars yearly on salt and sugar costs . . . your sweet brine goes **only** into the container . . . no overflow. Unit dispenses **accurately** measured amounts of brine and other liquids.

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COMPANY.....

STREET.....

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6019

MARKETING AND QUALITY CONTROL: USDA Field Offices (Continued)

NEW YORK 14, NEW YORK, Room 860, 641 Washington St.; WAtkins 4-1000 Ext. 216 & 217 Night: WA 4-3932.

PHILADELPHIA 6, PA., 601 U. S. Custom House, 2nd and Chestnut Streets; MA 7-6000 Ext. 582.

PORTLAND 3, MAINE, Rm. 307, 79 Exchange Bldg.; SPruce 4-8381.

RICHMOND 19, VA., 203 N. Governor St., Rm. 307; MIlton 4-4111. Ext. 2582.

ROCHESTER 23, N. Y., Genesee Valley Regional Market, 900 Jefferson Rd.; HIllside 5-4440.

WINTER HAVEN, FLA., Rm. 216, Florida Citrus Bldg. (Mail—P. O. Box 860); CYpress 3-7670 or CYpress 3-7651.

SAN JUAN, PUERTO RICO, c/o Puerto Rico Dept. of Agriculture & Commerce. (Mail: P. O. Box 10163, Santurce, P. R.); San Juan 3-1012.

Central District

ALBERT LEA, MINN., Room 3, P. O. Bldg.; FRanklin 3-2188.

CHICAGO 7, ILL., 1020 U. S. Custom House, 610 South Canal St.; HArrison 7-6910, exts. 251, 252.

COLUMBUS 15, OHIO, 436 Old Federal Bldg.; CApitol 1-6411, Ext. 460.

DETROIT 9, MICH., Rm. 40, Detroit Union Produce Term., 7201 West Fort St.; VInewood 1-1926.

FAYETTEVILLE 5, ARK., 320½ West Dickson St. (Mail—P. O. Box 338, University Station); HIlcrest 2-4021.

HAMMOND, LA., Southeastern College Campus (Mail—P. O. Box 151); Hammond 263.

HUMBOLDT, TENN., Post Office Bldg., 2nd Floor; SUnset 4-1330.

RIPON, WISCONSIN, Arcade Rd., Hwy. 23 (Mail—P. O. Box 96); BLack 540.

WESLACO, TEXAS, 245 South Texas Blvd. (Mail P. O. Box 102); WOodlawn 8-2772.

Western District

DENVER 2, COLO., 324 U. S. Custom House; KEystone 4-4151; ext. 8539.

FRESNO 2, CALIF., 3529 E. Tulare St.; AMherst 4-5971.

INDIO, CALIF., Room 103, Johnson Professional Bldg., 82-380 Miles Ave.; DIamond 7-1057.

Offices (Continued)

LOS ANGELES 15, CALIF., Rm. 451 Bendix Bldg., 1206 Maple Ave.; RIchmond 9-9323.
MILTON-FREEWATER, ORE., 111 S. Main St.; WEbster 8-3251.
PORTLAND 5, OREGON, 210 U. S. Court House; CApitol 6-3361, ext. 527.
SALEM, OREGON, 530 Glen Creek Drive, P. O. Box 1145; EMpire 3-3002.
SALT LAKE CITY 14, UTAH, B-45 State Capital Bldg.; DAvis 8-5428.
SAN FRANCISCO 2, CALIF., 506 New Mint Bldg., 133 Herman St.; KLondike 2-2350, ext. 6406.
SAN JOSE 10, CALIF., 670 Stockton Ave.; CYpress 5-7600.
SEATTLE 1, WASH., 1917—1st Ave., Rm. 207, Alaska Trade Bldg.; MUtual 2-3300, exts. 1142 and 1143.
STOCKTON 5, CALIF., 2269 E. Miner Ave.; HOward 5-7285.
YAKIMA, WASH., 212 Liberty Bldg.; GLencourt 2-3381.
HONOLULU 1, HAWAII, c/o Board of Commissioners of Agriculture & Forestry. (Mail: P. O. Box 5425, Pawaa Substation); 92071.

MARKETING AND QUALITY CONTROL: List of FDA Standards of Identity of Processed Foods

Many of the common forms of processed foods have been standardized by the federal government. This is done through the definitions and standards under the Food, Drug, and Cosmetic Act.

After a standard goes into effect, it becomes the official specification for a food. The product may contain only those ingredients listed. When optional ingredients are shown, they may be used and listed on the label.

Following is a list of processed foods regulated specifically by FDA:

Salad Dressing and Mayonnaise

Product	Section
Dressings for Foods, Part 25	
Mayonnaise	25.1
French Dressing	25.2
Salad Dressing	25.3

Canned Fruits and Fruits Juices

Part 27	
Apricots	27.10-27.14
Cherries	27.30-27.33
Figs	27.70 & 27.73
Fruit Cocktail	27.40-27.43
Orange Juice	27.107-27.110
Peaches	27.2-27.6
Pears	27.20-27.24
Pineapple	27.50-27.52
Pineapple Juice	27.54-27.56
Prunes	27.15

Any of the United States Standards of Identity listed may be secured upon request from: Food & Drug Administration, Room 5440, Health, Education and Welfare Building, 330 Independence Ave., S. W., Washington 25, D.C.

Jellies, Jams, Preserves

Fruit Butters, Fruit Jellies, Fruit Preserves, and Related Products Part 29

Fruit Butter		29.1
Apple	Pear	
Apricot	Plum	
Grape	Prune	
Peach	Quince	
Fruit Jelly		29.2
Apple	Guava	
Apricot	Loganberry	
Blackberry	Orange	
Black Raspberry	Peach	
Cherry	Pineapple	
Crabapple	Plum	
Cranberry	Pomegranate	
Damson plum	Prickly Pear	
Dewberry	Quince	
Fig	Red Raspberry	
Gooseberry	Red Currant	
Grape	Strawberry	
Grapefruit	Youngberry	
Greengage plum		
Preserves and Jams		29.3
Apricot	Huckleberry	
Blackberry	Loganberry	
Blackraspberry	Nectarine	
Blueberry	Orange	
Boysenberry	Peach	
Cherry	Pear	
Cranberry	Pineapple	
Crabapple	Plum	
Damson plum	Quince	
Dewberry	Red Raspberry	
Elderberry	Red Currant	
Fig	Rhubarb	
Gooseberry	Strawberry	
Grape	Tangerine	
Grapefruit	Tomato	
Greengage plum	Yellow Tomato	
Guava	Youngberry	

Canned Vegetabes

Parts 51 and 53, Service and Regulatory announcements

Corn, sweet		51.20-51.22
cream style	(Whole kernel)	
Corn, field		51.30 & 51.32
Beans, green snap		51.10-51.11
Beans, wax		51.15-51.16

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KLENZADE

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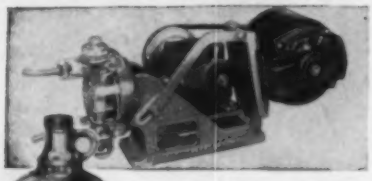
Chlorination



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COMPLETE

Sanitation Programs

Branch Offices in Principal Cities

KLENZADE PRODUCTS, INC.

BELOIT, WISCONSIN

Dept. 345

Reference Data

Mushrooms	51.503
Peas	51.1
Tomatoes, peeled, cored	53.40-53.42
Tomato Juice	53.1
Tomato Juice, yellow	53.5
Tomato Catsup	53.10
Tomato Puree	53.20
Tomato Paste	53.30

Vegetables not specifically regulated but which are identified and optional ingredients listed under section 51.990

Artichokes	Okra
Asparagus	Turnip Greens
Bean Sprouts	Onions
Shelled Beans	Parsnips
Lima Beans	Black-eye Peas
Butter Beans	Field Peas
Beets	Green Sweet Peppers
Beet Greens	Red Sweet Peppers
Broccoli	Pimientos
Brussels Sprouts	Potatoes
Cabbage	Rutabagas
Carrots	Salsify
Cauliflower	Spinach
Celery	Sweet Potatoes
Collards	Swiss Chard
Dandelion Greens	Truffles
Kale Mushrooms	Mustard Greens Turnips

Frozen Fruits and Juices

From Part 27, Canned Fruit and Juices

Lemonade, frozen concentrate	27.101
Orange Juice, frozen concentrate	27.111-27.112

Paste Products

Alimentary Pastes, Part 16

Macaroni Products	16.1
Milk Macaroni	16.2
Whole Wheat Macaroni	16.3
Wheat and Soy Macaroni	16.4
Vegetable Macaroni	16.5
Noodle Products	16.6
Wheat and Soy Noodle Products	16.7
Vegetable Noodles	16.8
Enriched Macaroni	16.9
Enriched Noodles	16.10

Shellfish

Part 36

Shrimp	36.3
Oysters	36.5-36.6 & 36.10-36.20

MARKETING/QUALITY CONTROL: Field Offices of FDA Processed Products Standardization and Inspection Div.

Washington Offices

George P. Larrick, Commissioner of Food and Drugs

John L. Harvey, Deputy Commissioner of Food and Drugs

Paul L. Day, Scientific Director

Division of Administrative Management, Leo L. Miller

Division of Federal-State Relations, James C. Pearson

Division of Public Information, Wallace F. Janssen

Division of Food, Henry Fischbach

Division of Nutrition, Oral L. Kline

Location of Field Districts

Atlanta 9, Ga.; 60 Eighth Street, N.E., John W. Sanders, Jr.: Trinity 6-3311

Baltimore 2, Md., Room 800, U.S. Appraiser's Stores, 103 S. Gay St., Richard E. Williams; Plaza 2-8460

Boston 10, Mass.; Room 805, U.S. Appraiser's Stores, 408 Atlantic Avenue, Nevis E. Cook; Capitol 3-7781

Buffalo 3, N. Y.; Room 415, Post Office Bldg., South Division & Ellicott Sts., Allen T. Retzlaff; TL 3-6332

Chicago 7, Ill.; Room 1222, Main Post Office Bldg., Van Buren & Canal Sts., John H. Guill, Jr.; Wabash 2-9200

Cincinnati 2, Ohio; Room 501, U.S. Post Office & Courthouse, Theodore Maraviglia; Dunbar 1-2200

Dallas 4, Texas; 3032 Bryan St., Sam D. Fine; Riverside 8-5611

Denver 2, Colo.; Room 573, New Customhouse Bldg., Samuel Alfend; Keystone 4-4151

Detroit 7, Mich.; 1560 E. Jefferson Ave., George T. Daughters; Woodward 2-7495

Kansas City 6, Mo.; 330 U.S. Courthouse, 811 Grand Avenue, Alfred Barnard; Baltimore 1-7000

Los Angeles 15, Calif.; Room 514, 1401 S. Hope Street, Gordon R. Wood; Richmond 9-4711

Minneapolis 1, Minn.; Room 201, Federal Bldg., Washington & Third Avenues, South, A. Harris Kenyon; Federal 2-3211

New Orleans 16, La.; Room 224, U.S. Customhouse, 423 Canal Street, Edwin C. Boudreaux; 529-2411

New York 14, N. Y.; Room 1200, U.S. Appraiser's Stores, 201 Varick Street, Charles A. Herrmann; Watkins 4-9353

Philadelphia 6, Pa.; Room 1204, U.S. Customhouse, Second & Chestnut Sts., Fred L. Lofsvold; Market 7-6000

St. Louis 1, Mo.; Room 1007, New Federal Bldg., 1114 Market Street, Roy S. Pruitt; Main 1-8100

San Francisco 2, Calif.; Room 518, Federal Office Building, Fulton & Leavenworth Sts., McKay McKinnon, Jr.; Klondike 2-2350

Seattle 4, Wash.; Room 501, Federal Office Bldg., Kenneth E. Menfore; Mutual 2-3300

INDUSTRY AWARDS

The major awards given in the processed foods industry are listed below. The description of each of the awards is followed by the year, the name of the recipient, and a brief description of him.

Babcock-Hart Award

Sponsored by the Nutrition Foundation and administered by the Institute of Food Technologists. The award is made to a person who has made a distinguished contribution which has resulted in improved public health through some aspect of nutrition.

1948—**Fred C. Blanck,** H. J. Heinz Company, chief research chemist.
1949—**Clarence Birdseye,** Birdseye Packing, frozen food research consultant. (D)
1950—**Carl R. Fellers,** University of Massachusetts—head of Dept. of Food Technology. (D)
1951—**Samuel C. Prescott,** M. I. T., Professor Emeritus.
1952—**Fred W. Tanner,** University of Illinois, professor of bacteriology. (D)
1953—**Charles N. Frey,** director of Fleischmann Labs, retired.
1954—**Edwin J. Cameron,** National Canners Assn., director of research labs. (D)
1955—**William V. Cruess,** University of California, professor of food technology.
1956—**Gail M. Dack,** University of Chicago, professor of bacteriology.
1957—**Elmer M. Nelson,** U. S. Food and Drug Administration, chief vitamin division. (D)
1958—**Bernard L. Oser,** Food Research Lab, director.
1959—**Samuel Lepkovsky,** University of California, poultry research, zoology.
1960—**Arnold H. Johnson,** National Dairy Products Corp., manager research labs.
1961—**Emil Mrak,** chancellor, Davis campus, Univ. of Calif.

Nicholas Appert Award

Made to honor a person for preeminence in the field of food technology.

1942—**William V. Cruess,** University of California, professor of food technology.
1943—**Samuel C. Prescott,** M. I. T., professor of food technology.
1944—**C. A. Browne,** U. S. Department of Agriculture, Washington, D. C., agricultural chemist.
1945—**A. W. Bitting,** National Canners Assn., and Glass Containers Mfg. Assn., research, consulting food technologist. (D)
1946—**C. H. Bailey,** University of Minnesota, cereal chemistry.
1947—**C. Olin Ball,** National Canners Assn., American Can Company, Owens-Illinois Glass Co., technical research on heat sterilization.
1948—**C. A. Elvehjem,** University of Wisconsin, biochemistry.
1949—**Roy C. Newton,** Purdue, professor of physical chemistry.
1950—**Thomas M. Rector,** General Foods Corporation, food preservation and processing. (D)
1951—**A. E. Stevenson,** Continental Can Company, technology department.
1952—**Edward M. Chace,** U. S. Department of Agriculture, citrus by-products and fruit and vegetable chemist, retired.
1953—**Victor Conquest,** Armour & Company, director of research.
1954—**Charles N. Frey,** director of Fleischmann labs, retired.
1955—**Charles G. King,** Nutrition Foundation, scientific director.
1956—**Bernard E. Proctor,** M. I. T., professor of food technology. (D)
1957—**Emil M. Mrak,** University of California, professor of food technology.
1958—**William F. Geddes,** University of Minnesota, professor of agricultural biochemistry. (D)
1959—**Berton S. Clark,** American Can Company, director of research, retired.
1960—**Ernest H. Wiegand,** University of Oregon, Professor Emeritus.
1961—**H. C. Diehl,** director, Refrigeration Research Foundation. Managing director Trans-American Refrigerated Suc. Ltd.

IFT Industrial Award

Awarded annually to an outstanding innovation or improvement in food technology which has been applied commercially with success.

1959—**Eastern Division Engineering and Development Laboratory** of the U.S.D.A. Agriculture

SANDVIK
Stainless
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CONVEYORS
Simplify
Bacteria
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Sandvik stainless steel belt conveyor installed at Dulany Foods, Inc., Exmore, Va. carries beans through inspection. On return pass, belt is continuously sprayed with chlorinated water.

Solid, one-piece, non-porous, stainless belt—

- Eliminates "hiding-places" for organic matter
- Is easy to clean
- Is impervious to food acids and cleaning agents
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RIETZ SERVICE

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ANGLE DISINTEGRATORS typify Rietz quality and performance

*Applications Include:

- Wet or dry grinding of difficult materials
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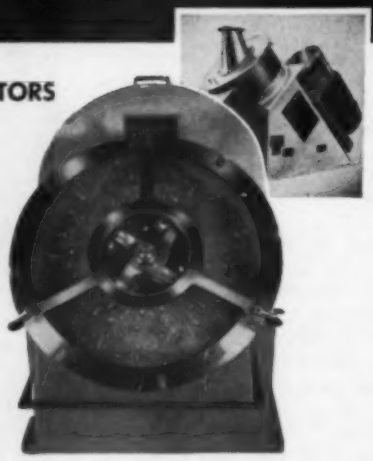

5600 RPM was stopped stroboscopically to illustrate three major Rietz Angle Disintegrator advantages

1. 360° effective screen surface
2. Rapid grinding action between rotors and screen
3. Complete accessibility for cleaning

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DISINTEGRATORS • PREBREAKERS • EXTRUCTORS • THERMASCREWS

Research Service and staff of James Cording, Jr., and Miles J. Willard, Jr., under the direction of Roderick K. Eskew for the development of a new dehydrated mashed potato.

1960—**American Meat Foundation** and three staff members, R. H. Deibel, C. F. Niven and C. D. Wilson jointly with **Merck & Company** and food technologist, R. P. Dudley for a new sausage manufacturing procedure that cuts processing time from seven days to one day.

International Award

Made annually by the Australia sections of the Institute of Food Technologists to a person judged to have made outstanding efforts in the international exchange of ideas in the field of food technology.

1956—**Robert S. Scull,** U. S.
1957—**Laurence V. Burton,** U. S. (D)
1958—**Henri Cheftel,** France
1959—**Ross A. Chapman,** Canada
1960—**James R. Vickery,** Australia
1961—**Maynard Joslyn,** U. S.

Hall of Fame

Awarded biennially by the National Pickle Packers Assn.

1955—**Joseph Urschel,** president, Urschel Laboratories, Inc.
1956—**John L. Etchells,** U. S. Food Fermentation Laboratory, USDA.
1958—**Homer Ohlaharer,** White Cap Co.
1960—**Dan Ridenour,** Technical director, Wm. J. Stange Co.
1961—**Swift and Co.** for the development of ProTen, a technique of injecting an enzyme in a living animal to tenderize the meat after slaughter.

'49'ers Service Award

Given as an acknowledgement of outstanding service to the canning industry by the '49'ers.

1954—**Samuel C. Prescott,** M. I. T., professor of food technology.
1955—**John Charles Walker,** University of Wisconsin, plant pathology, disease resistant varieties.
1956—**Louis Gardner MacDowell,** Florida Citrus Commissioner, research director.
1957—**Carlos Campbell,** National Canners Assn., executive secretary, retired.
1958—**C. Olin Ball,** National Canners Assn., American Can Company, Owens-Illinois, heat

sterilization research.

1960—**Fred A. Stare,** Columbus (Wis.) Canning Co.

1961—**Karl F. Meyer,** University of Calif.

Man of the Year

Awarded by the Southern California section of the Institute of Food Technologists in recognition of leadership in the industry and for the use of science and technology in producing products of superior quality.

1960—**A. N. Prater,** president, Gentry Div., Consolidated Foods Corp.

1961—**Max S. Dunn,** associate dean of graduate school, University of Calif. at Los Angeles.

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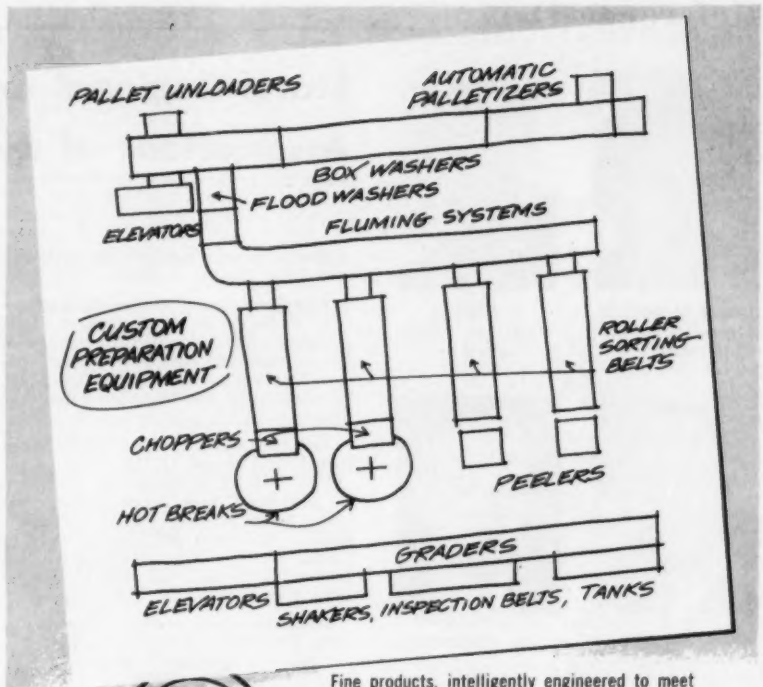
Manufacturers of

Modern Labeling and Sealing Adhesives

1000 Eighth Ave. So. MA 4-8636
Seattle 4, Wash.

4023 No. Interstate Ave. AT 4-1493
Portland 12, Ore.



Fine products, intelligently engineered to meet the requirements of the food processing industry

Benner-Nawman, Inc.

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For Accurate Grading of Pickles And Similar Vegetables

THE NATIONAL PICKLE SEPARATOR

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THE STANDARD MACHINE COMPANY

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PURE CANE REFINED GRANULATED and LIQUID SUGARS

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State, Regional and National Associations of the Food Industry

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American Dietetic Assn.

H. C. WOLF
American Spice Trade Assn.

CHESTER ROCHE
Ass. Blue Lake Green Bean Canners

E. N. REUSSWIG
Assn. of Food Distributors, Inc.

J. L. SULLIVAN
Calif. Canning Peach Assn.

R. E. COLLINS
Calif. Canning Pear Assn.

Alaska Salmon Industry, Inc., 200 Colman Bldg., Seattle 4, Wash.

American Cocoa Research Institute, 1745 K St., N.W., Washington 6, D. C.
Chmn: Hans J. Wolflisberg, Nestle Co., White Plains, N. Y. V-Chmn: John P. Woodward, Klein Chocolate Co., Elizabethtown, Pa. Exec Dir: Bradshaw Mintener.

American Dietetic Assn., 620 N. Michigan Ave., Chicago 11, Ill.
Pres: Adelia M. Beeuwkes, University of Michigan, Ann Arbor, Mich. Pres-Elect: Edith A. Jones, Natl. Institutes of Health, Bethesda, Md. Treas: Wintress Dalbey Murray, Eastman Kodak Co., Rochester, N.Y. Sec: Virginia F. Harger, Ohio State University, Columbus, Ohio.

American Honey Institute, Commercial State Bank Bldg., Madison 3, Wis.
Chmn: A. Baxter C. Woodman. Dir: Harriett M. Grace

American Spice Trade Assn., 82 Wall St., New York 5, N.Y.
Pres: Howard C. Wolf, McCormick & Co., Inc., Baltimore, Md. V-P: Albert E. Keogler, Albert E. Keogler, Albert Ehlers, Inc., Brooklyn, N.Y. Treas: C. A. P. van Stolk, Arthur G. Dunn, New York City. Exec V-P: Stewart P. Wands.

Associated Blue Lake Green Bean Canners, Inc., 522 Pittock Block, Portland 5, Ore.
Pres: Chester Roche, Blue Lake Packers, Inc., Corvallis, Ore. 1st V-P: L. H. Hogue, Dole Corp., Salem, Ore. 2nd V-P: A. H. Randall, United Growers, Inc., Salem, Ore. Sec-Treas: Don Dawson.

The Association of Food and Drug Officials of the U.S., c/o J. F. Lakey, P.O. Box 9095, Austin 17, Texas.
Pres: C. S. Brinsfield. V-P: Dr. Vincent Stewart. Sec-Treas: J. F. Lakey.

Association of Food Distributors, Inc., 100 Hudson St., N. Y. 13, N.Y.
Pres: E. Norton Reusswig, Lestrade Bros., Inc., New York City. V-P: Marvin Enderm Inc. V-P: Lewis E. Nordlinger, Steinhardter & Nordlinger, Inc. Treas: W. C. Martin, Indiran, Inc. Exec Sec: T. R. Schoonmaker.

Association of Pacific Fisheries, 302 Colman Bldg., Seattle 4, Wash.
Pres: A. R. Barthold, Alaska Packers Assn., Seattle, Wash. 1st V-P: T. F. Sandoz, Columbia River Packers Assn., Inc., Astoria, Ore. 2nd V-P: S. M. Rosenberg, New England Fish Co., Seattle, Wash. Exec Sec: Herald A. O'Neill.

Baltimore Canned Foods Exchange, c/o Ernest H. Langrall, 2105 Aliceanna St., Baltimore 13, Md.
Pres: William E. Lamble, Jr., Southern Packing Co., Baltimore, Md. V-P: Rentzell D. Cleaveland, H. J. McGrath Co., Baltimore, Md. Treas: E. Elmer Langrall, J. Langrall & Bros., Inc., Baltimore, Md. Sec: E. H. Langrall.

Brazil Nut Assn., 100 Hudson St., New York 13, N. Y.
Exec Sec: T. R. Schoonmaker.

California Canning Peach Assn., World Trade Center, Ferry Bldg., San Francisco 11, Calif.
Pres: J. L. Sullivan. V-P: Wayne D. Salter. Sec: Earl Blaser, California Can-

G. VAN CAMP
Calif. Fish Canners Assn.

T. C. PETERSON
Canadian Food Processors Assn.

D. T. SAXBY
Canners League of Calif.

C. P. McCORMICK
Flavoring Extract Mfrs. Assn.

BUDD MAYER
Fla. Frozen Food Assn. of Miami

W. W. McPHILLIPS
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PAUL S. WILLIS
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Institute of Food Technologists

J. G. WHITE
International Apple Assn.

F. W. BROWNE
Maine Canners & Freezers Assn.

JAMES BROWN
Maine Sardine Council

ners & Growers, San Francisco, Calif. Treas: Arthur Tomlinson. Mgr: Ralph B. Bunje.

California Canning Pear Assn., P. O. Box 630, Modesto, Calif.
Pres: Robert E. Collins. Sec: Lee W. Veerkamp.

California Fig Institute, P. O. Box 709, Fresno, Calif.
Chmn: Paul Innes. V-Chmn: Harry Bud Buck. Mng Dir: Frank J. Domenik.

California Fish Canners Assn., Ferry Bldg., Terminal Island, Calif.
Pres: Gilbert Van Camp, Jr., Van Camp Sea Food Co., Long Beach, Calif. V-P: Gerald Cigliano, Pan-Pacific Fisheries, Inc., Terminal Island, Calif. Sec-Treas: George A. Dew, Westgate-California Corp., San Diego, Calif. Exec Dir: Charles R. Carry.

California Freezers Assn., 244 California St., San Francisco 11, Calif.
Pres: Kenneth M. Eberts, Stokely-Van Camp, Inc., Oakland, Calif. V-P: James S. Lawless, Frosted Fruit Products, Los Angeles, Calif. Treas: Douglas S. Jardine, California Consumers Corp., Los Angeles, Calif. Sec & Mng Dir: Thomas B. House.

California Lima Bean Growers Assn., Oxnard, Calif.

California Olive Assn., 461 Market St., San Francisco, Calif.
Pres: Frank J. Oberti, Oberti Olive Co., Madera, Calif. V-P: Elton J. Leggett, Wyandotte Olive Grovers Assn., Oroville, Calif. Sec-Treas: Erline Hevel.

California Processors & Growers, Inc., 1200 Financial Center Bldg., Oakland 12, Calif.
Pres: Paul V. Rea, U. S. Products Corp., Ltd., San Jose, Calif. V-P: Frank J. Maestri, Dole Corp., San Jose, Calif. Exec V-P: John W. Bristow.

California Prune Advisory Board, Room 334, World Trade Center, San Francisco 11, Calif.
Chmn: R. A. McArthur. V-Chmn: E. M. Faye, Sunsweet Growers, Inc. Sec: R. L. Engell, Calif. Packing Corp., San Francisco, Calif. Mgr: R. W. Jewell.

California Strawberry Advisory Board, Box 57, Santa Clara, Calif.
Pres: Lee M. Warner, Santa Fe Berry Packers, Beverly Hills, Calif. V-P: Fred Hirasuna, Sunnyside Packing Co. Sec: Malcolm B. Douglas.

Canadian Food Processors Assn., 108 Sparks St., Ottawa, Canada.
Pres: T. C. Peterson, Alberta Canning Co., Ltd. 1st V-P: J. E. Shaffner, M. W. Graves & Co., Ltd. 2nd V-P: F. J. Andres, Pyramid Canners Ltd. Treas: W. H. Heeney, Heeney Frosted Foods Ltd. Mgr. P. O. Robinson. Sec: S. E. Gilchrist.

Canadian Institute of Food Technology, c/o W. J. Eva, Ogilvie Flour Mills Co., Ltd., P.O. Box 846, Winnipeg 1, Man.
Pres: W. R. Mason, General Food Ltd., Toronto. Pres Elect: E. A. M. Asselbergs, Dept. of Agriculture, Ottawa. Sec-Treas: W. J. Eva, Ogilvy Flour Mills Ltd., Winnipeg, Manitoba.

Canners League of California, 9 First St., Room 720, San Francisco 5, Calif.
Pres: D. T. Saxby, California Packing Corp., Berkeley, Calif. V-P: Peter M. Filice & Perrelli Canning Co., Richmond, Calif. Exec V-P: M. A. Clevenger. Sec-Treas: R. J. Marsh.

Cereal Institute, Inc., 135 S. La Salle St., Chicago 3, Ill.
Pres: Andrew Duncan.

Chocolate Manufacturers Assn. of the United States of America, 1745 K St., N.W., Washington 6, D. C.
Pres: Hans J. Wolflisberg, Nestle Co., White Plains, N. Y. V-P: John P. Woodward, Klein Chocolate Co., Elizabethtown, Pa. Exec Dir: Bradshaw Mintener.

Cling Peach Advisory Board, 153 Market St., San Francisco, Calif.
Chmn: Charles Herrington, Onstott Orchards, Gridley, Calif. V-Chmn: William S. Geddes, United States Products Corp., Ltd., San Jose, Calif. Sec: Ralph B. Bunje, California Canning Peach Assn., San Francisco, Calif. Mgr. Bill Hoard.

Columbia River Salmon and Tuna Packers Assn., P. O. Box 60, Astoria, Ore.

Corn Industries Research Foundation, Inc., 1001 Connecticut Ave., N.W., Washington 6, D. C.
Pres: Frank K. Greenwall, National Starch & Chemical Corp., New York City. V-P: William T. Brady, Corn Products Co., New York City, and A. E. Staley, Jr., A. E. Staley Mfg. Co., Decatur, Ill. Exec V-P: Floyd J. Hasking.

Dried Fruit Assn. of California, 478 W. San Carlos St., San Jose, Calif.
Pres: T. O. Kluge, Sunsweet Growers Inc., San Jose, Calif. V-P: E. W. Landrum, California Packing Corp., San Francisco, Calif., and J. P. Perrucci, Mayfair Packing Co., San Jose, Calif. Exec V-P: A. E. Thorpe. Sec-Treas: W. S. Follett.

Eastern Frosted Foods Assn., 1053 Raymond Blvd., Newark, N. J.

Flavoring Extract Mfrs. Assn., c/o John S. Hall, Hickey & Hall, 1051 First National Bank Bldg., Chicago 3, Ill.
Pres: C. P. McCormick, Jr., McCormick & Co., Inc., Baltimore, Md. 1st V-P: S. M. Kleinschmidt, General Dynamics Corp., Chicago, Ill. 2nd V-P: Dr. A. S. Wendt, Fred Fear & Co., Brooklyn, N. Y. 3rd V-P: Hunt P. Wilson, Warner-Jenkinson Mfg. Co., St. Louis, Mo. Sec: Francis C. Oakley, Baker Extract Co., Springfield, Mass. Treas: Howard Smith, Virginia Dare Extract Co., Inc., Brooklyn, N. Y. Exec Sec: John S. Hall.

Florida Canners Assn., P. O. Box 1459, Winter Haven, Fla.
Pres: Henry Cragg, Minute Maid, Orlando, Fla. 1st V-P: Herschell Sorrells, Adams Packing Co., Auburndale, Fla.

E. BAILEY
Maine Sardine Packers Assn.

G. W. K. VOIGT
Mushroom Canners League

R. L. HUTCHINSON
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National Canners Assn.

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National Coffee Assn.

H. H. BUNDY
National Fisheries Institute

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Natl. Frozen Food Assn.

J. A. MEETER
Natl. Kraut Packers Assn.

J. H. EHRENFELD
Natl. Meat Canners Assn.

S. R. BAXLEY
National Peanut Council

C. E. DARWENT
N. J. Asparagus Industry Council

M. REGAN
N. Y. State Canners & Freezers Assn.

Reference Data

REESE LAMB
NW Canners & Freezers Assn.

D. V. AGIDIUS
NW Cherry Briners Assn.

A. H. RANDALL
NW Packers & Growers, Inc.

C. G. KING
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Southwestern Frozen Food Assn.

R. L. MITCHELL
Tri-State Packers Assn.

R. H. SHIELDS
U.S. Beet Sugar Assn.

2nd V-P: Bruce Skinner, H. P. Hood & Sons, Dunedin, Fla. Treas: Reid W. Jensen, Treesweet Products Co., Ft. Pierce, Fla. Exec-Sec: C. C. Rathbun.

Florida Frozen Food Assn. of Miami, Inc., c/o Dave Tyson, Zero Food Storage, Inc., 7007 N.W. 37th Ave., Miami 47, Fla.

Pres: Budd Mayer, Budd Mayer Co. V-P: James Conway, Veri-Best Frozen Foods. Treas: Sidney Schwartz, Sidney's Portion Pak. Sec: Dave Tyson.

Florida Vegetable Canners Assn., 4401 E. Colonial Drive, Orlando, Fla.

Pres: W. Gordon Schmitt, Steinfeldt-Thompson Co., Inc., Dania, Fla. 1st V-P: Samuel Sugarman, Sugar Rose Canning Co., Plant City, Fla. 2nd V-P: R. L. Golden, Winter Haven, Fla. Sec-Treas: J. S. Peters.

Frozen Pea Council, 333 N. Michigan Ave., Chicago 1, Ill.

Pres: T. E. McCaffray, National Fruit Canning Co., Seattle, Wash. V-P: D. M. Walker, Libby, McNeill & Libby, Chicago, Ill. Treas: Edward H. Coale, Seabrook Farms Co., Seabrook, N. J. Sec-Asst Treas: Francis C. Kerr.

Frozen Potato Products Institute, 333 N. Michigan Ave., Chicago 1, Ill.

Pres: F. Webster Browne, Snow Flake Canning Co., Brunswick, Me. V-P: Leon Jones, J. R. Simplot Co., Caldwell, Idaho. Treas: Harry A. Trimm, Jr., Stokely-Van Camp, Inc., Oakland, Calif. Sec-Asst Treas: Francis C. Kerr.

Georgia Canners Assn., 116 E. Solomon St., Griffin, Ga.

Pres: Warren W. McPhillips, King Pharr Canning Co., Cullman, Ala. 1st V-P: Ernest Bloodworth, Cherokee Products Co., Haddock, Ga. 2nd V-P: Victor Russell, Monticello Canning Co., Crossville, Tenn. Sec-Treas: Barton Stephens.

Green Coffee Assn. of New York City, Inc., 101 Front St., New York 5, N. Y.

Grocery Manufacturers of America, Inc., 205 E. 42nd St., New York 17, N.Y.

Pres: Paul S. Willis. 1st V-P: H. J. Wolflisberg, Nestle Co., White Plains, N. Y. 2nd V-P: William T. Brady, Corn Products Co., New York City. 3rd V-P: W. H. Burkhart, Lever Brothers Co., New York City. Sec: Harrison F. Dunning, Scott Paper Co., Chester, Pa. Treas: H. E. Meinhold, Duffy Mott Co., Inc., New York City.

Halibut Assn. of North America, 66 Mation St., Seattle, Wash.

Pres: E. A. Ruthford, San Juan Fishing & Packing Co., Seattle, Wash. V-P: Dick Lambe, British Columbia Packers Ltd., Vancouver, B. C., Canada. Sec: W. S. Gilbert, Washington Fish & Oyster Co., Inc., Seattle, Wash. Treas: Donald S. Johnston, Seattle Seafoods, Inc., Seattle, Wash. Exec-Sec: C. R. Pollock.

Illinois Canners Assn., 114½ N. Monroe St., Streator, Ill.

Pres: H. E. Larkin, Rochelle Asparagus Co., Roiochelle, Ill. V-P: R. J. Herdman, Green Giant Co., Belvidere, Ill. Sec-Treas: W. D. Jones.

Indiana Canners Assn., 2120 N. Meridian St., Indianapolis 2, Ind.

Pres: Kenneth W. Lucas, Indiana Pack-Co., Royal Center, Ind. V-P: Andrew Kutlik, Libby, McNeill & Libby, Kokomo, Ind. Treas: A. E. Coddington, Coddington Packing Co., Mt. Comfort, Ind. Sec: Warren R. Spangle.

Institute of American Poultry Industries, 59 E. Madison St., Chicago 3, Ill.

Pres: Harold M. Williams. Chmn of Board: John R. Hargreaves, Caroline Poultry Farms, Inc., Federaldsburg, Md. Vice Chmn: M. H. Simmons, Plus Poultry, Inc., Siloam Springs, Ark. Sec-Treas: William F. Priebe, Jr., Priebe and Sons, Inc., Chicago, Ill.

Institute of Food Technologists, 176 W. Adams, Chicago 3, Ill.

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Institute of Sanitation Management, 855 Ave. of the Americas, N.Y.C.

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Institute of Shortening and Edible Oils, Inc., 1415 19th St., N.W., Washington 6, D. C.

Pres & Sec: E. W. Brockenbrough. Treas: J. A. Ryan, C. F. Simonin's Sons, Inc.

International Apple Assn., Inc., 1302 18th St., N.W., Washington, D. C.

Pres: Jere G. White, Jersey Fruit Cooperative Assn., Riverton, N. J. Treas: Charles J. Dougherty, Philadelphia Terminals Auction Co., Philadelphia, Pa. Sec: Norbert W. Eschmeyer. Exec V-P: Fred W. Burrows.

Iowa-Nebraska Canners Assn., Box 483, Marshalltown, Ia.

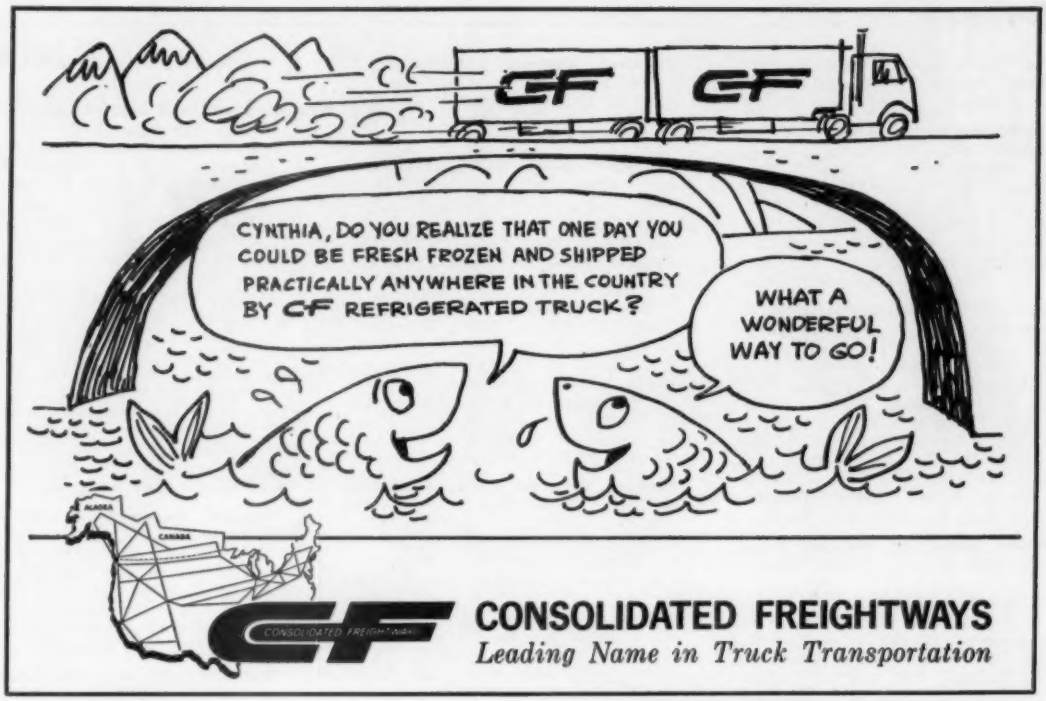
Pres: Ralph Day, Ackley Food Processors, Inc., Ackley, Ia. V-P: Fred Wright, Beaver Valley Canning Co., Gimes, Ia. Sec-Treas: Guy E. Pollock

Louisiana-Mississippi-Alabama Vegetable Processors Assn., c/o J. F. Bowman, Southern Shell Fish Co., Harvey, La.

Maine Canners & Freezers Assn., P. O. Box 798, 184 Read St., Portland, Me.

Pres: F Webster Browne, Snow Flake Canning Co., Brunswick, Me. V-P: Charles A. Stewart, A. L. Stewart & Son, Cherryfield, Me. Sec-Treas: Harold C. Harmon, H. L. Forhan Co., Portland, Me. Exec Treas: John W. Gault.

Maine Sardine Council, 15 Grove St., Augusta, Me.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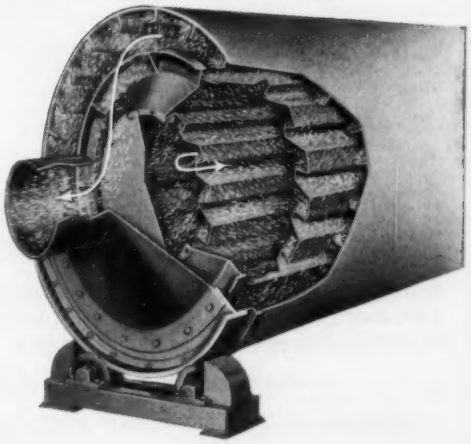

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Maine Sardine Packers Assn., 15 Grove St., Augusta, Me.
Pres: Eugene Bailey, N. Lubec Mfg. & Canning Co., Lubec, Me. 1st V-P: Carl Wight, Bath Canning Co., Bath, Me. 2nd V-P: Alger Pike, Trident Packing Co., Lubec, Me. Sec-Treas: James Abernethy, Sunset Packing Co., W. Pembroke, Me. Exec-Sec: Richard E. Reed.

Mayonnaise & Salad Dressing Manufacturers Assn., 333 N. Michigan Ave., Chicago 1, Ill.
Pres: Wendell Bishop, Mrs. Clark's Foods, Inc., Des Moines, Ia. 1st V-P: Gordon Perry, Holsum Products, Inc., Milwaukee, Wis. 2nd V-P: Henry Wills, Nalley's Inc., Tacoma, Wash. Treas: Herman Loeb, Jr., Piknik Products Co., Montgomery, Ala. Sec: Richard Clements, Clements Food Products, Oklahoma City, Okla. Exec Sec: Hubert C. Sherk.

Michigan Canners' & Freezers' Assn., 1014 Franklin St., S.E., Grand Rapids, Mich.
Pres: Robert L. Hutchinson, Michigan Fruit Canners, Fennville, Mich. V-P: Walter A. Reed, Jr., Lake Odessa Canning Co., Lake Odessa, Mich. Sec-Treas: Reed M. Roberts.

Michigan Frozen Food Packers Assn., c/o Dorr Dean, P.O. Box 145, Eau Claire, Mich.
Pres: Thomas Dewhirst, House of David, Benton Harbor, Mich. V-P: Hal Carlson, Burnette Farms Packing Co., Hartford, Mich. Sec-Treas: Dorr Dean, Silver Mill Frozen Foods, Inc.

Midwest Preservers Assn., c/o Arthur Israel, 1513 W. Morse Ave., Chicago, Ill.
Treas: R. D. Fellows, Squire Dingee Co., Chicago, Ill. Sec: Francis J. Oelerich, K. L. Fox & Co., Chicago, Ill. Exec Sec: Arthur Israel.

Millers National Federation, 309 W. Jackson Blvd., Chicago 6, Ill.
Pres: Ellis D. English, Archer-Daniels-Midland, Minneapolis, Minn. Sec-Treas: John Sherlock. Exec V-P C. L. Mast, Jr.

Minnesota Canners & Freezers Assn., Association Bldg., 2901 Pleasant Ave., Minneapolis 3, Minn.
Pres: John Hammel, Owatonna Canning Co., Owatonna, Minn. V-P: Charles A. Brown, Olivia Canning Co., Olivia, Minn. Sec-Treas: George A. Borg, Northland Canning Co., Cokato, Minn.

Mushroom Canners' League, 25 N. Duke St., York, Pa.
Pres: G. W. K. Voigt, Jr., Delaware Mushroom Corp., Wilmington, Dela. Sec-Treas: Jack R. Grey.

National-American Wholesale Grocers' Assn., 60 Hudson St., New York 13, N.Y.
Pres: Walter F. Whittier, Hannaford Brothers Co., Portland, Me. Treas: Douglas A. Grimes, Super Food Services, Inc., Chicago, Ill. Exec V-P: Rudolph L. Treuenfele.

National Association of Frozen Food Packers, 919 18th St., N.W., Washington 6, D. C.
Pres: James S. Lawless, Frosted Fruit Products, Los Angeles, Calif. 1st V-P: N. L. Waggoner, Jr., Olney & Carpenter, Inc., Wolcott, N. Y. 2nd V-P: E. H. Coale, Seabrook Farms Co., Seabrook, N. J. Exec V-P: Lawrence S. Martin.

National Assn. for the Specialty Food Trade, Inc., 120 E. 56th St., New York 22, N. Y.
Pres: Bernard Hamstra, H. Hamstra & Co., Clifton, N. J. 1st V-P: H. G. Norton, H. G. Norton Co., New Milford, Conn. 2nd V-P: P. Jack Krushan, Perry Chiparnoi, Inc., New York City. 3rd V-P: P. Julian Cowan, Cowan & Fransman. Sec: Renato M. Antolini, G. B. Raffetto, Inc., New York City. Treas: T. G. Koryn, T. G. Koryn, Inc., New York City.

National Canners Assn, 1133 20th St., N.W., Washington 6, D. C.
Pres: John C. Hemingway, H. C. Hemingway & Co., Clyde, N. Y. V-P: Robert C. Cosgrove, Green Giant Co., Le Sueur, Minn. Exec V-P & Sec: Milan D. Smith.

National Coffee Assn., 120 Wall St., New York 5, N. Y.
Pres: John F. McKiernan. Chmn: Jack R. Durland, Cain's Coffee Co., Oklahoma City, Okla. V-Chmn: Austin A. O'Brien, Byrne, Delay & Co. Treas: David G. Platter, Red Owl Stores, Inc., Hopkins, Minn. Sec: George E. Boecklin.

National Dietary Foods Assn., Station A. Box 85, Cincinnati 22, Ohio.
Exec Sec: Stanley N. Phillips.

National Fisheries Institute, 1614 20th St., N.W., Washington 9, D.C.
Pres-elect: Harvey H. Bundy, Jr., Gorton's of Gloucester, Gloucester, Mass. Chmn: Thomas D. McGinnes, Virginia Seafoods, Inc., Irvington, Va. Treas: Louis Vitale, Los Angeles Smoking & Curing Co., Los Angeles, Calif. Sec: T. H. Shepard, Jr., Schulman-Shepard Co., New Orleans, La.

National Food Brokers Assn., 1916 M St., N.W., Washington 6, D. C.
Pres: Watson Rogers. 1st V-Chmn: R. L. Fitzwater, Jr., R. L. Fitzwater & Associates, Camden, N. J. 2nd V-Chmn: J. E. Raley, Jr., Raley Brothers, Inc., Atlanta, Ga. 3rd V-Chmn: R. S. Prewitt, McElroy & Prewitt Co., Des Moines, Ia. Treas: H. Wayne Clarke, Walter Leaman Co., Washington, D. C.

National Food Distributors Assn., 333 N. Michigan, Chicago 1, Ill.
Pres: Milton V. Brown, Lorenz Schneider Co., Queens Village, N. Y. 1st V-P: Joseph Carpel, Carpel Foods, Washington, D. C. 2nd V-P: Melvin H. Neils, Walters Foods, Milwaukee, Wis. 3rd V-P: R. W. Peterson, Norcal Distributing Co., Oakland, Calif. Treas: Harold Metscher, Metscher Foods, Jamaica, N. Y. Exec Dir: William W. Carpenter.

National Frozen Food Assn., 60 E. 42nd St., New York 17, N. Y.
Pres: C. Gordon Griffith, Plantation Foods Corp., Miami, Fla. Sec: Frank Hicks, FrosTex Frozen Food Co., Austin, Tex. Treas: Howard D. Jester, Sr., B. D. Jester, Inc., Wilmington, Dela. Exec Dir: Harry K. Schauffler.

National Fruit Syrup Mfrs. Assn., 135 Broadway, New York 6, N. Y.
Pres: Morton D. Wool, N. Y. Extract Co., Inc., New York City. V-P: L. George Rosskam, David Michael & Co., Inc., Philadelphia, Pa. V-P: George M. Low, Murray Co., Boston, Mass. V-P: Miller Winston, Blanke-Baer Extract & Preserving Co., St. Louis, Mo. Treas: Jack Siawetsky, E. B. Evans, Inc., Philadelphia, Pa. Joseph B. Margolis, Lenox, Inc. Exec Dir & Counsel: Robert M. Rubenstein.

National Institute of Oilseed Products, 3500 Roncon Annes, San Francisco 19, Calif.

National Kraut Packers Assn., 202 S. Marion St., Oak Park, Ill.
Pres: J. Arthur Meeter, Meeter Bros. & Co., Union Grove, Wis. V-P: Elbert Garlock, Empire State Pickling Co., Phelps, N. Y. Sec-Treas: William R. Moore.

National Macaroni Institute, 139 North Ashland Ave., Palatine, Ill.
Pres: Emanuel Ronzoni, Jr., Ronzoni Macaroni Co., 52-03 Northern Blvd., Long Island City, N. Y. 1st V-P: Albert Ravarino, Ravarino & Freschi, Inc., St.

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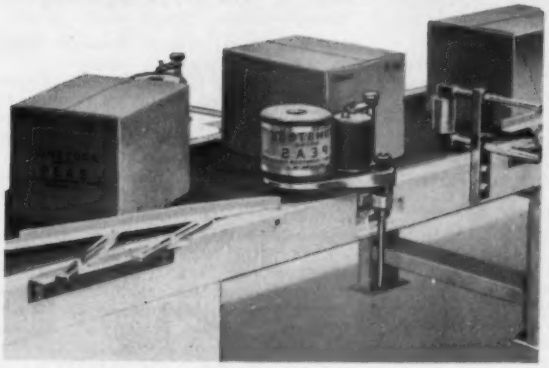

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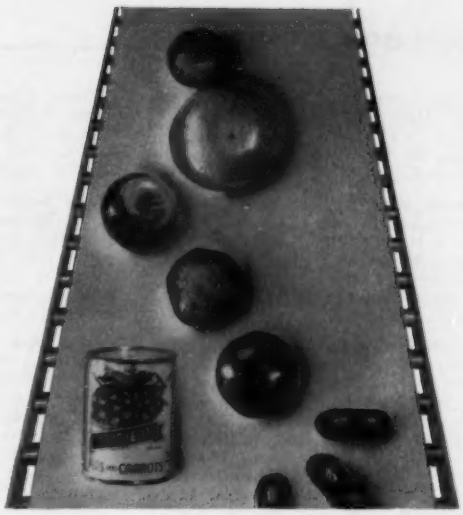

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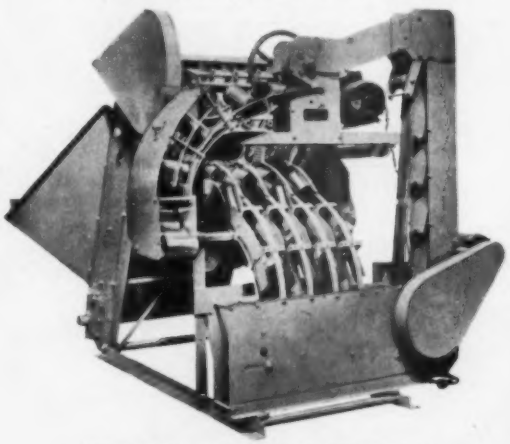

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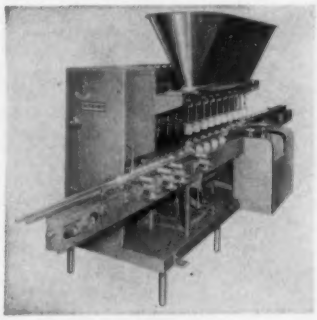

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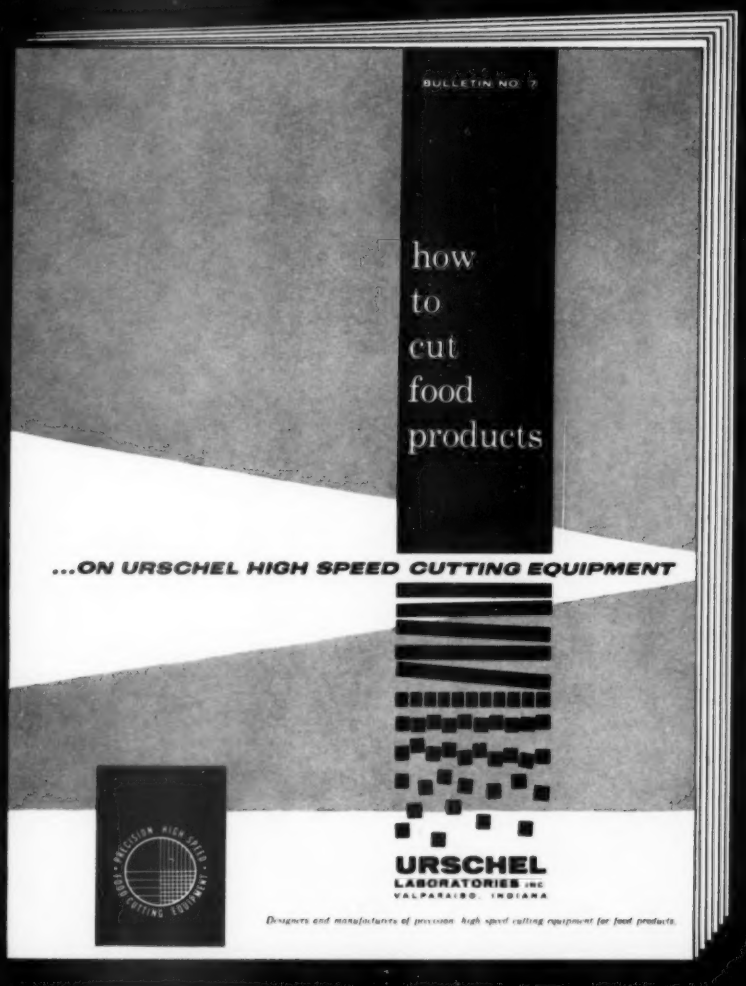

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